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**Woodcock et al.**

(10) **Patent No.: US 11,940,250 B2**
(45) **Date of Patent: Mar. 26, 2024**

(54) **TARGET SUPPORT, SYSTEM AND METHOD**

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(72) Inventors: **Robert Woodcock**, Dickinson, TX (US); **Lindsay Quebe**, Texas City, TX (US)

( * ) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 490 days.

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(22) Filed: **Jul. 27, 2021**

(65) **Prior Publication Data**

US 2021/0356238 A1 Nov. 18, 2021

**Related U.S. Application Data**

(62) Division of application No. 15/931,381, filed on May 13, 2020, now abandoned.

(60) Provisional application No. 62/847,817, filed on May 14, 2019.

(51) **Int. Cl.**
***F41J 1/10*** (2006.01)

(52) **U.S. Cl.**
CPC ..... ***F41J 1/10*** (2013.01)

(58) **Field of Classification Search**
CPC ..... F41J 1/10; F41J 3/0061; F41J 3/00; F41J 3/0004
USPC ..... 156/278
See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

| | | | |
|---|---|---|---|
| 402,112 | A | 4/1889 | Sterick |
| 1,218,398 | A | 3/1917 | Gurtov |
| 2,812,947 | A | 11/1957 | Fatzinger et al. |
| 3,088,738 | A | 5/1963 | Meyer |
| 3,163,418 | A | 12/1964 | Myers |
| 3,280,499 | A | 10/1966 | Studen |
| 4,054,288 | A | 10/1977 | Perrine, Sr. |
| 4,066,261 | A | 1/1978 | Stewart |
| 4,203,600 | A | 5/1980 | Brown |
| 4,239,236 | A | 12/1980 | Parham et al. |
| 4,373,733 | A | 2/1983 | Smith, Jr. |
| 4,477,082 | A | 10/1984 | Mckenzie |
| 4,565,376 | A | 1/1986 | Croll |
| 4,597,574 | A | 7/1986 | Wolfe |
| 4,630,832 | A | 12/1986 | Swanson |
| 4,643,434 | A | 2/1987 | Carlin |
| 4,657,261 | A | 4/1987 | Saunders |
| 4,773,653 | A | 9/1988 | Unverzagt |
| 5,145,133 | A | 9/1992 | France |
| 5,308,084 | A | 5/1994 | Morrell |
| 5,503,403 | A | 4/1996 | Morrell |
| 5,649,708 | A | 7/1997 | Podlesny |

(Continued)

FOREIGN PATENT DOCUMENTS

| | | |
|---|---|---|
| GB | 2403161 | 12/2004 |

OTHER PUBLICATIONS

Sportman's Guide, Mckenzie Aim Rite Layered Foam Bear, https://www.sportsmansguide.com/product/index/mckenzie-aim-rite-layered-foam-bear-target?a=373284, South St. Paul, MN, U.S.A.

(Continued)

*Primary Examiner* — James D Sells
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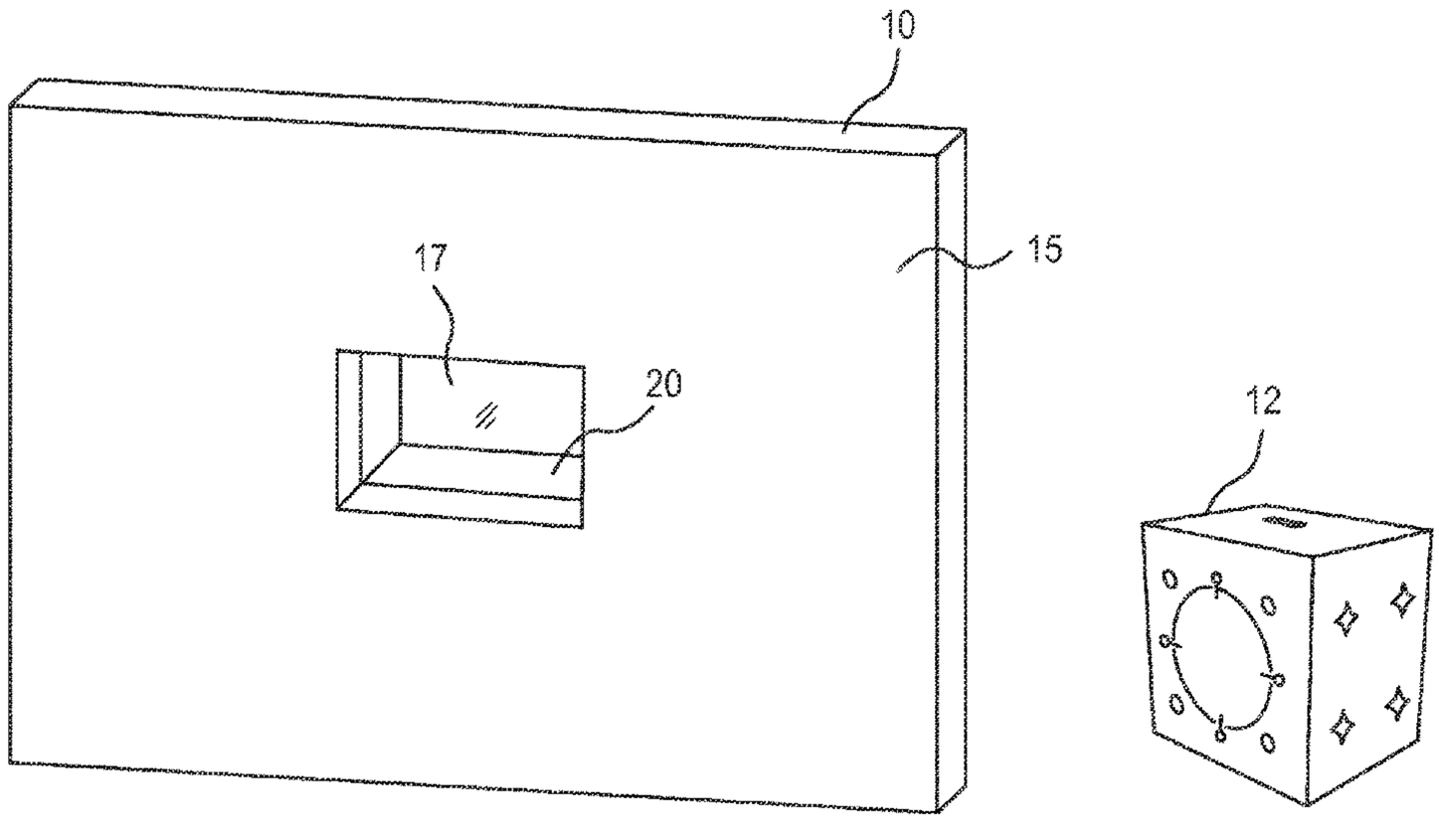
(57) **ABSTRACT**

The present disclosure is directed to a target support system. The target support system includes a support that is operationally configured to hold one or more projectile targets.

**20 Claims, 22 Drawing Sheets**



(56) **References Cited**

U.S. PATENT DOCUMENTS

| | | | |
|---|---|---|---|
| 6,068,261 | A | 5/2000 | Nettle |
| 6,254,100 | B1 | 7/2001 | Rinehart |
| 6,435,512 | B1 | 8/2002 | Beckwith, Sr. |
| 6,491,303 | B1 | 12/2002 | Huston |
| 6,543,778 | B2 | 4/2003 | Baker |
| 6,550,773 | B2 | 4/2003 | McKenzie et al. |
| 6,575,469 | B2 | 6/2003 | Love |
| 6,966,557 | B2 | 11/2005 | Kirk |
| 6,983,939 | B2 | 1/2006 | Pulkrabek |
| 7,070,185 | B2 | 7/2006 | Pulkrabek |
| 7,258,345 | B2 | 8/2007 | Anderson, Jr. |
| 7,293,776 | B2 | 11/2007 | Fenwick |
| 7,380,796 | B1 | 6/2008 | Hinton |
| 7,434,810 | B2 | 10/2008 | DeMille |
| 7,455,298 | B1 | 11/2008 | Nettle |
| 7,475,880 | B2 | 1/2009 | Bosik |
| 7,744,090 | B1 | 6/2010 | Nettle |
| 8,720,896 | B2 | 5/2014 | Matthis |
| 8,757,626 | B2 | 6/2014 | Acker |
| 8,757,627 | B1 | 6/2014 | Sedlacek |
| 8,771,107 | B1 | 7/2014 | Ayala |
| 8,876,114 | B2 | 11/2014 | Morrell |
| 8,910,944 | B2 | 12/2014 | Mason, III |
| 9,568,286 | B1 | 2/2017 | Carrillo Fuentevilla et al. |
| 9,958,239 | B1 | 5/2018 | Snell et al. |
| 10,113,841 | B2 | 10/2018 | Foley |
| 10,378,864 | B2 | 8/2019 | Soukos |
| 10,520,283 | B2 | 12/2019 | Behnk, Jr. |
| 10,809,041 | B1 | 10/2020 | Weigel |
| 2002/0151387 | A1 | 10/2002 | Henson |
| 2003/0008110 | A1 | 1/2003 | Hsu |
| 2004/0108659 | A1 | 6/2004 | Pulkrabek |
| 2004/0140623 | A1 | 7/2004 | Pulkrabek |
| 2005/0204696 | A1 | 9/2005 | Hall |
| 2007/0029733 | A1 | 2/2007 | Anderson |
| 2007/0290446 | A1 | 12/2007 | Amick |
| 2008/0054570 | A1 | 3/2008 | Potterfield et al. |
| 2008/0185786 | A1 | 8/2008 | Loveland |
| 2010/0015452 | A1 | 1/2010 | Helton |
| 2011/0024986 | A1 | 2/2011 | Walker |
| 2011/0233870 | A1 | 9/2011 | Oh |
| 2013/0249168 | A1 | 9/2013 | Kepple |
| 2013/0270772 | A1 | 10/2013 | McGovern |
| 2014/0042700 | A1 | 2/2014 | Baron |
| 2014/0091190 | A1 | 4/2014 | Argo |
| 2014/0091527 | A1 | 4/2014 | Schneider |
| 2015/0253115 | A1 | 9/2015 | Hartcraft |
| 2016/0016060 | A1 | 1/2016 | Goldwitz |
| 2016/0176175 | A1 | 6/2016 | Strauss |
| 2016/0298942 | A1 | 10/2016 | Skinner |
| 2017/0184377 | A1 | 6/2017 | Carrillo Fuentevilla et al. |
| 2018/0066924 | A1 | 3/2018 | Miller |
| 2018/0321018 | A1 * | 11/2018 | Wilson ..... F41J 13/02 |
| 2019/0143188 | A1 | 5/2019 | Moran |

OTHER PUBLICATIONS

First Shot Targets, Steel Targets, Coyote with 4" Kill Zone Flash Indicator, http://www.firstshottargets.com/index.php?route=product/product&product_id=76, Lakewood, CO, U.S.A.

Lancaster Archery Supply, Bowtree Block/Cube Target Stand, http://www.lancasterarchery.com/bowtree-block-cube-target-stand.html, Lancaster, PA, U.S.A.

Wuhan Welldone Laser Co., Ltd., New design archery foam target Dice type EXPE archery shooting game target, Alibaba, https://www.alibaba.com/product-detail/New-design-archery-foam-target-Dice_62416061177.html?spm=a2700.galleryofferlist.0.0.48e13c93099XxD&bypass=true, Hangzhou, Zhejiang, China.

Bulldog Targets, RangeDog Archery Target With Outdoor Stand, https://bulldogtargets.com/products/rangedog-archery-target-with-outdoor-stand?variant=13622045835299, Winnipeg, Manitoba, Canada.

* cited by examiner

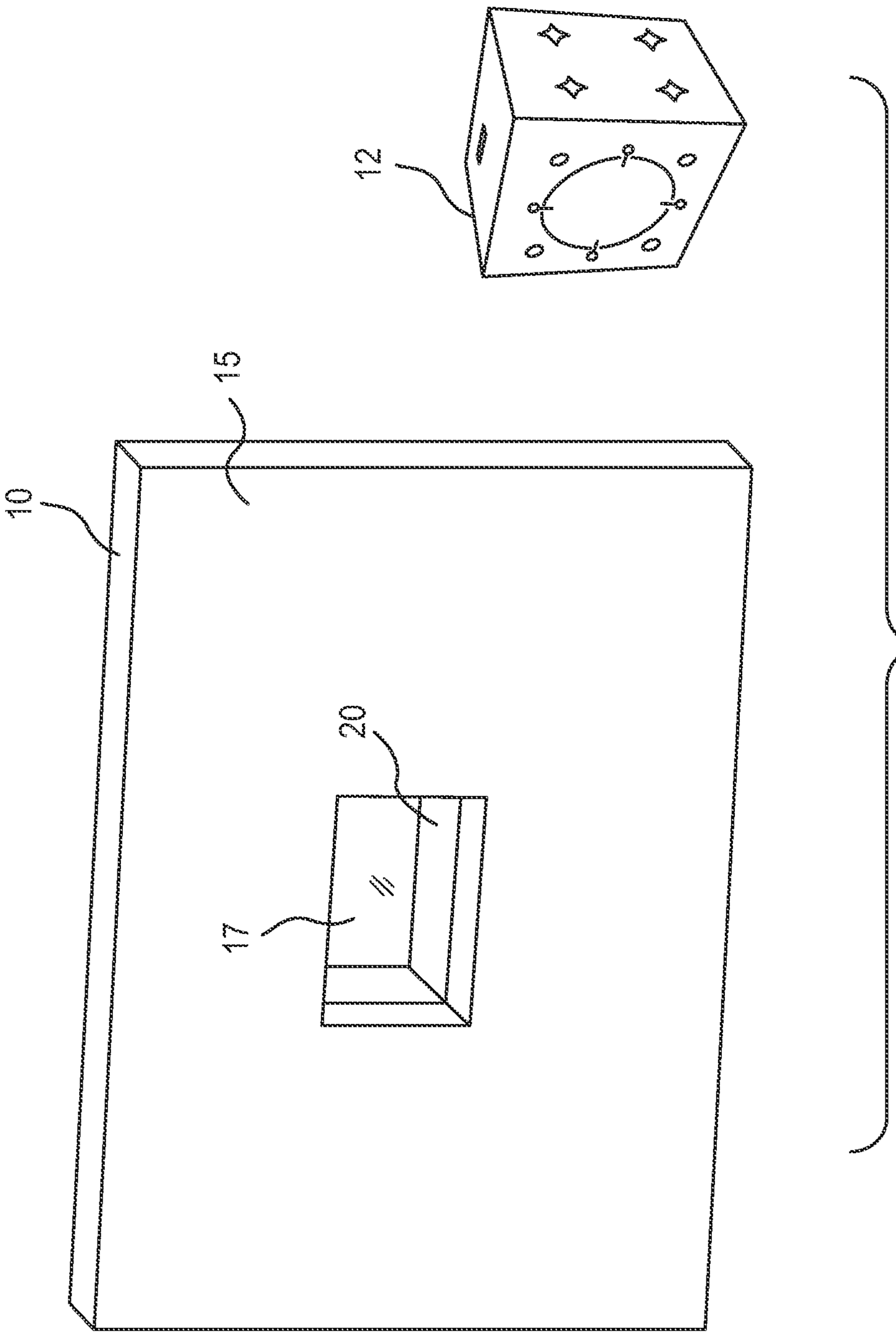



FIG. 1

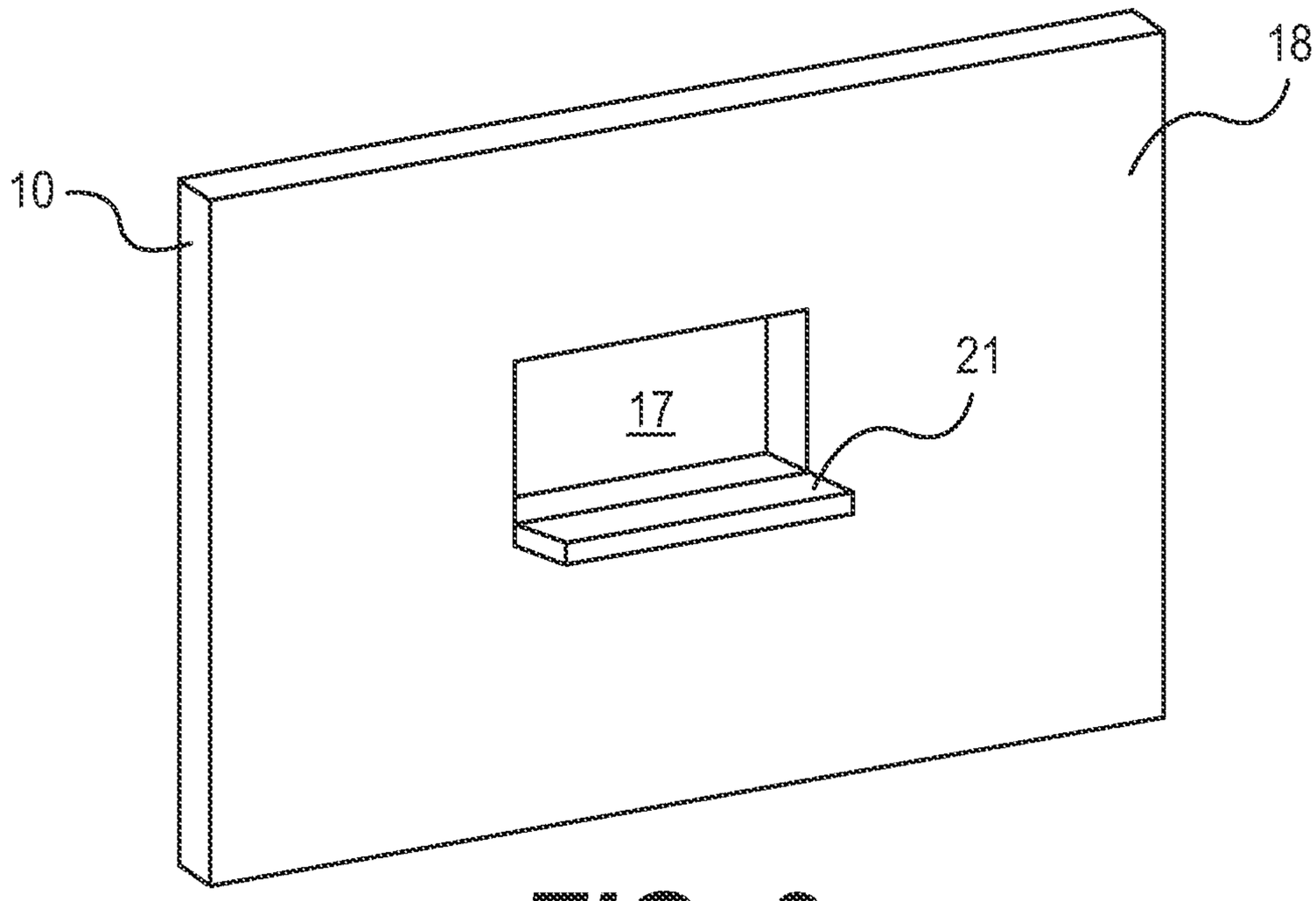



FIG. 2

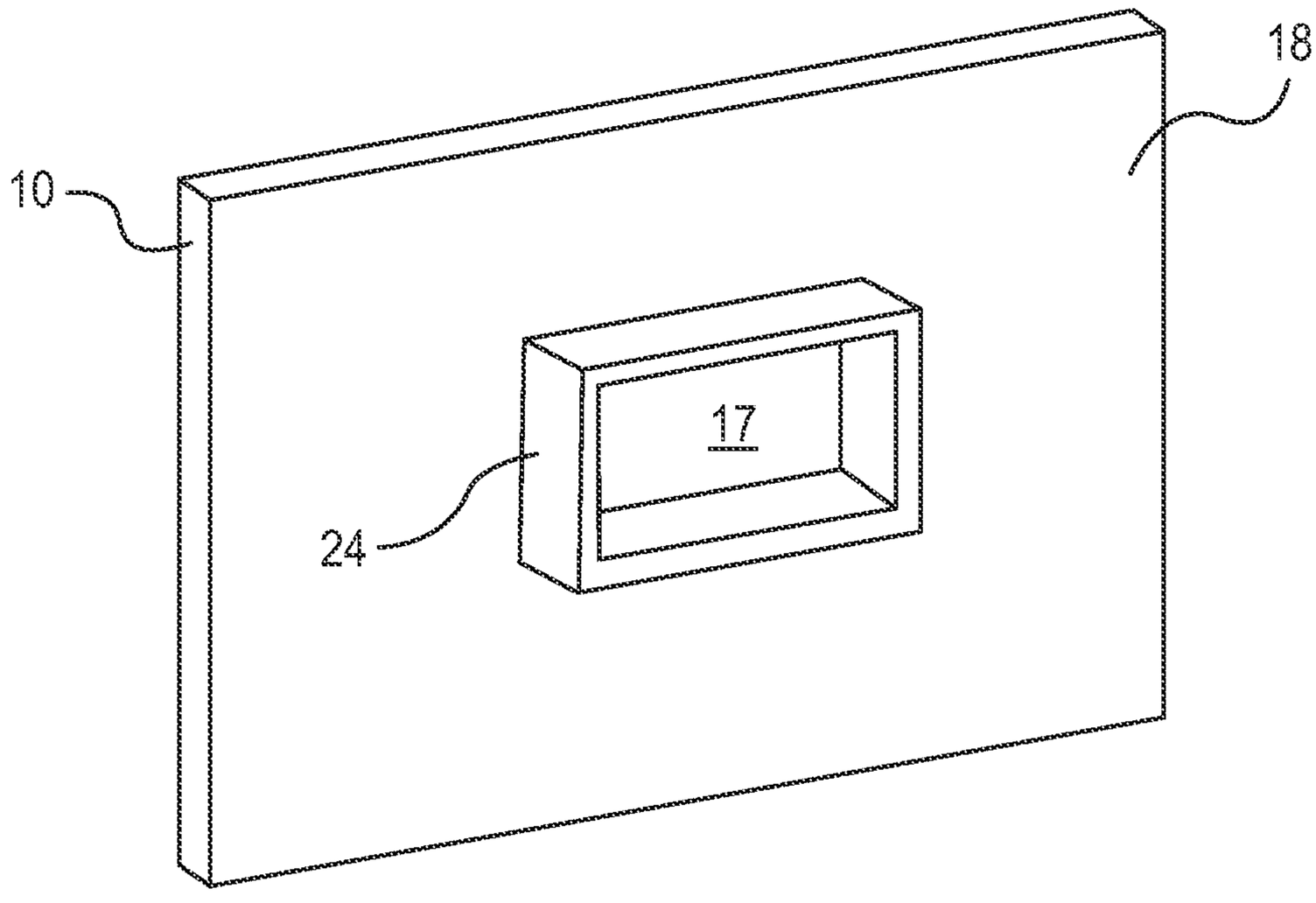



FIG. 3

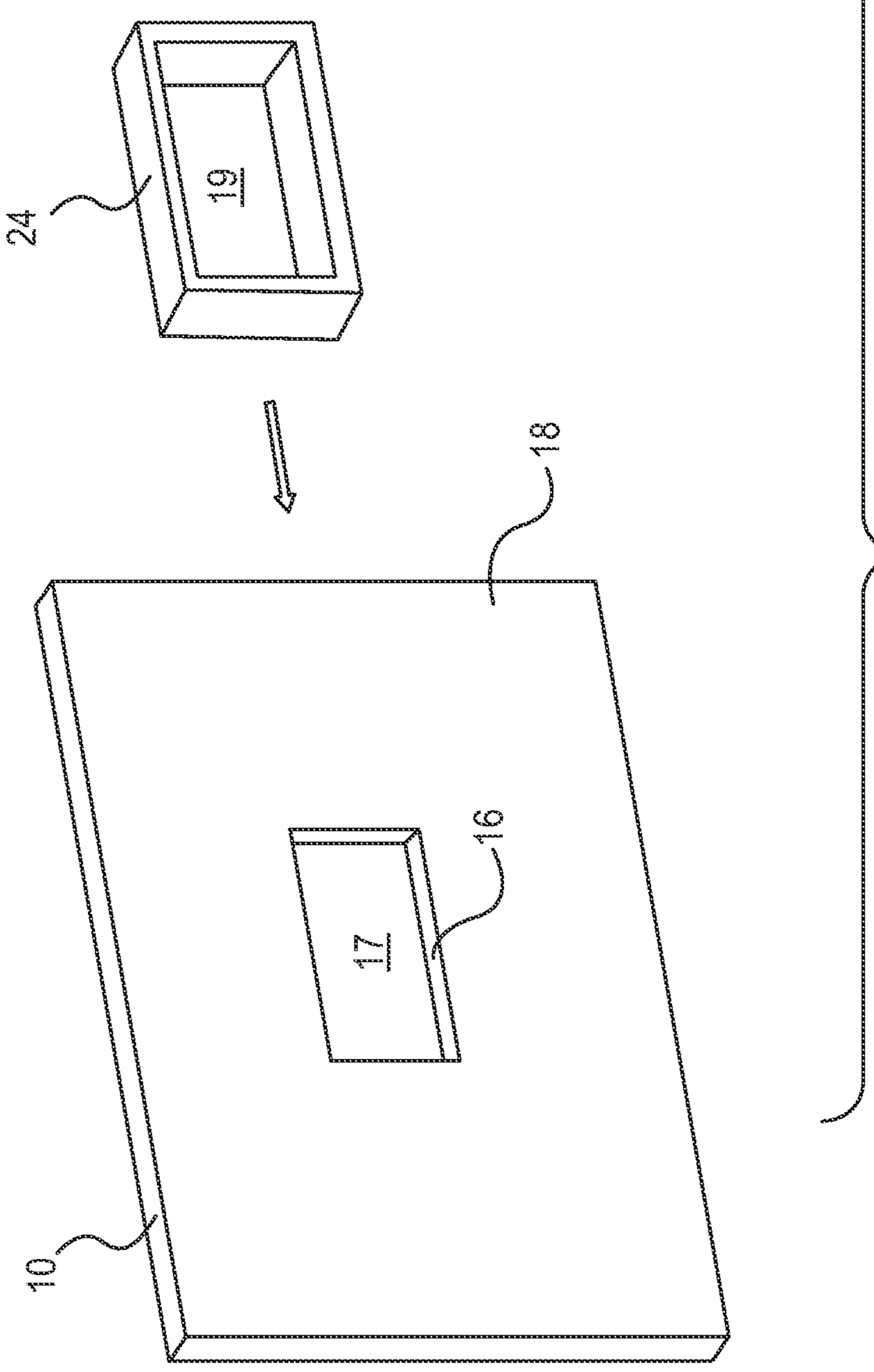



FIG. 4

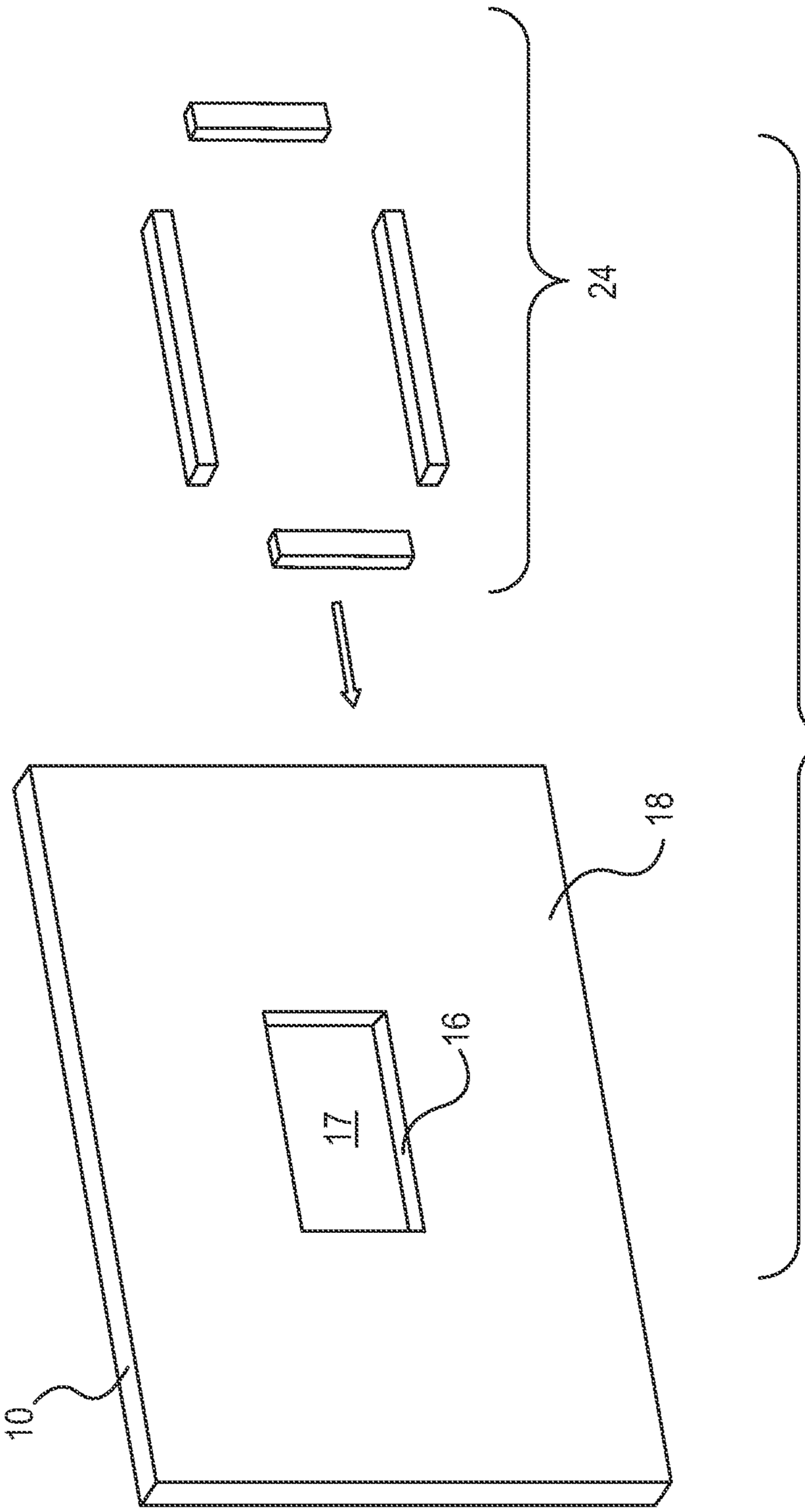



FIG. 5

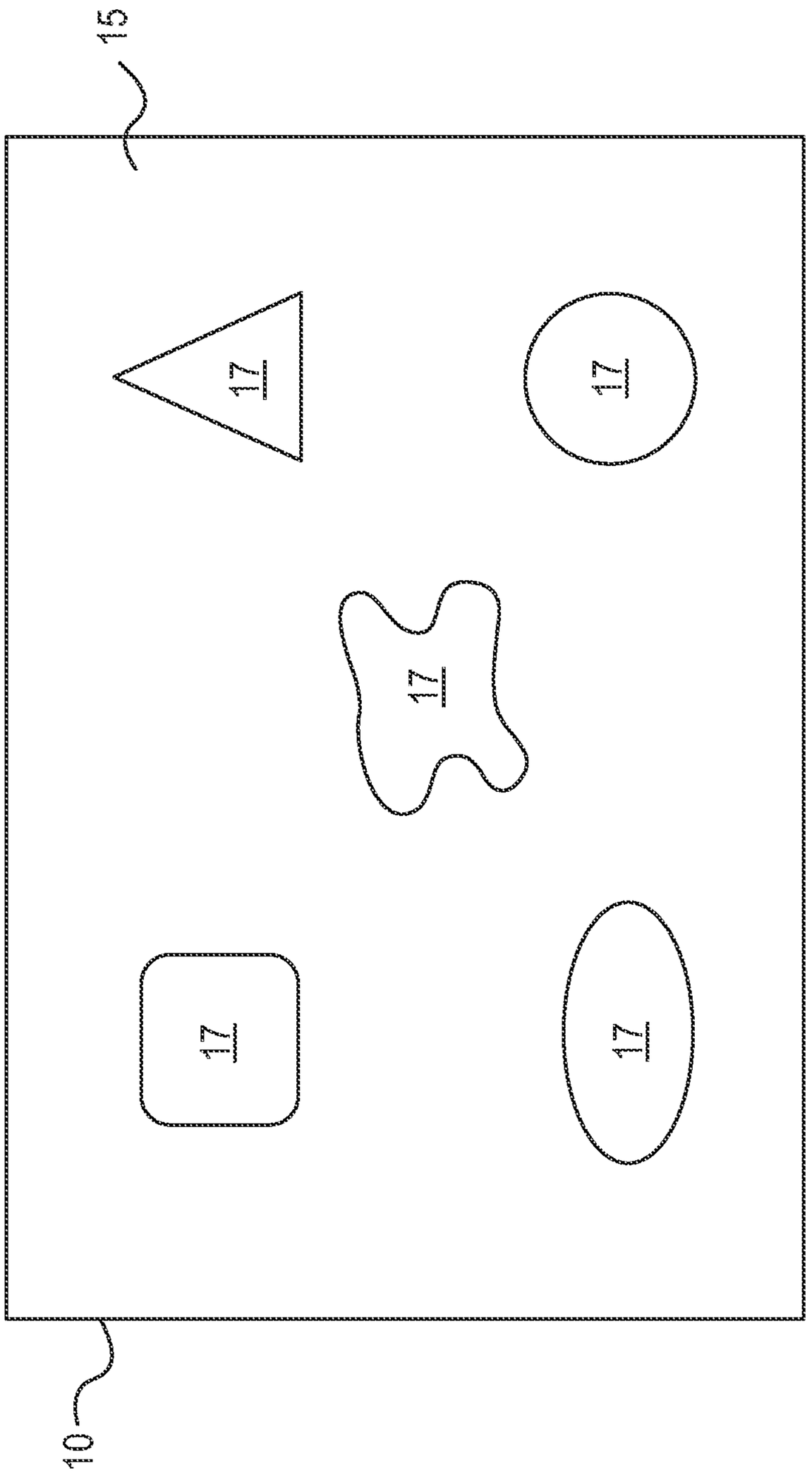



FIG. 6

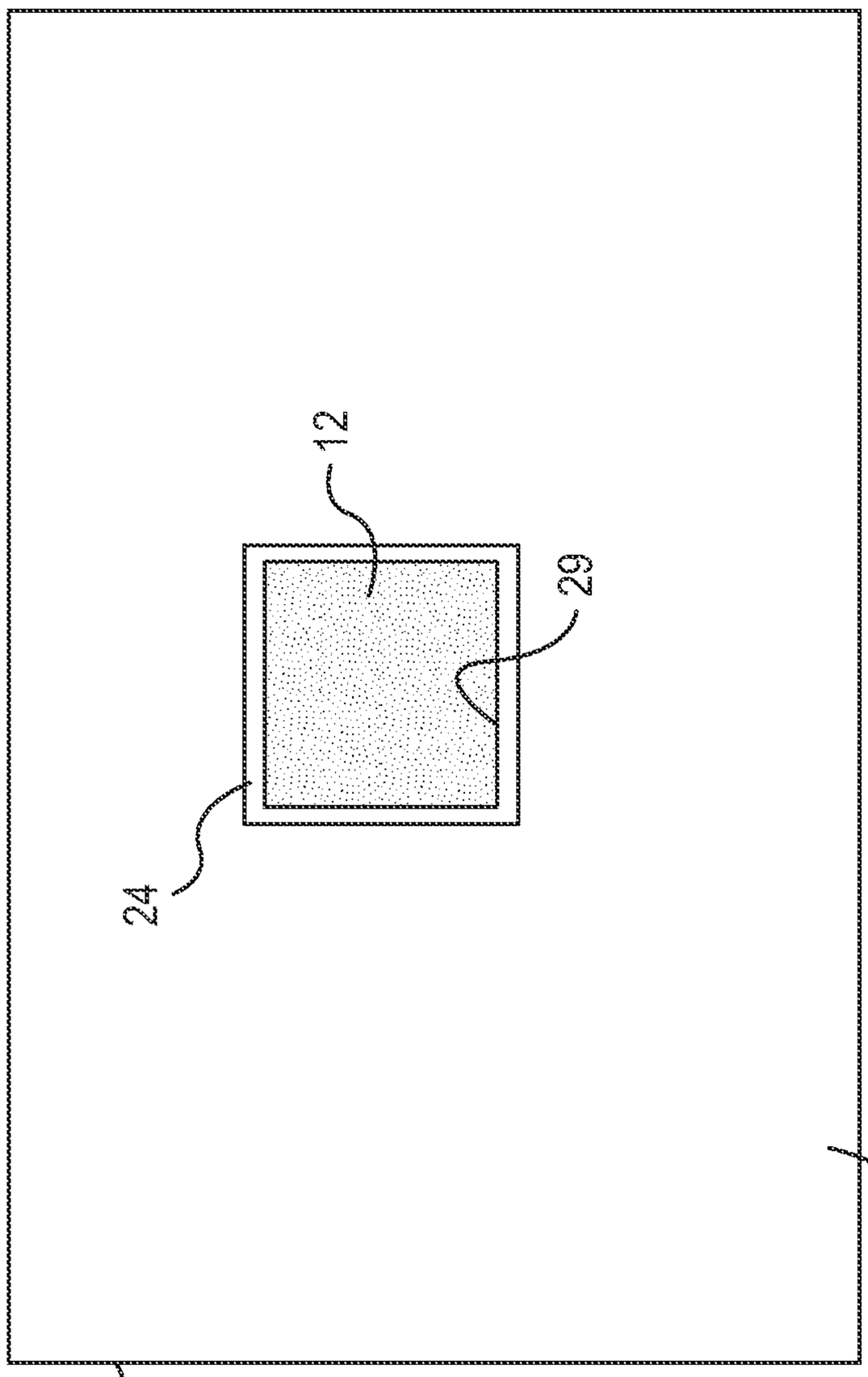



FIG. 7

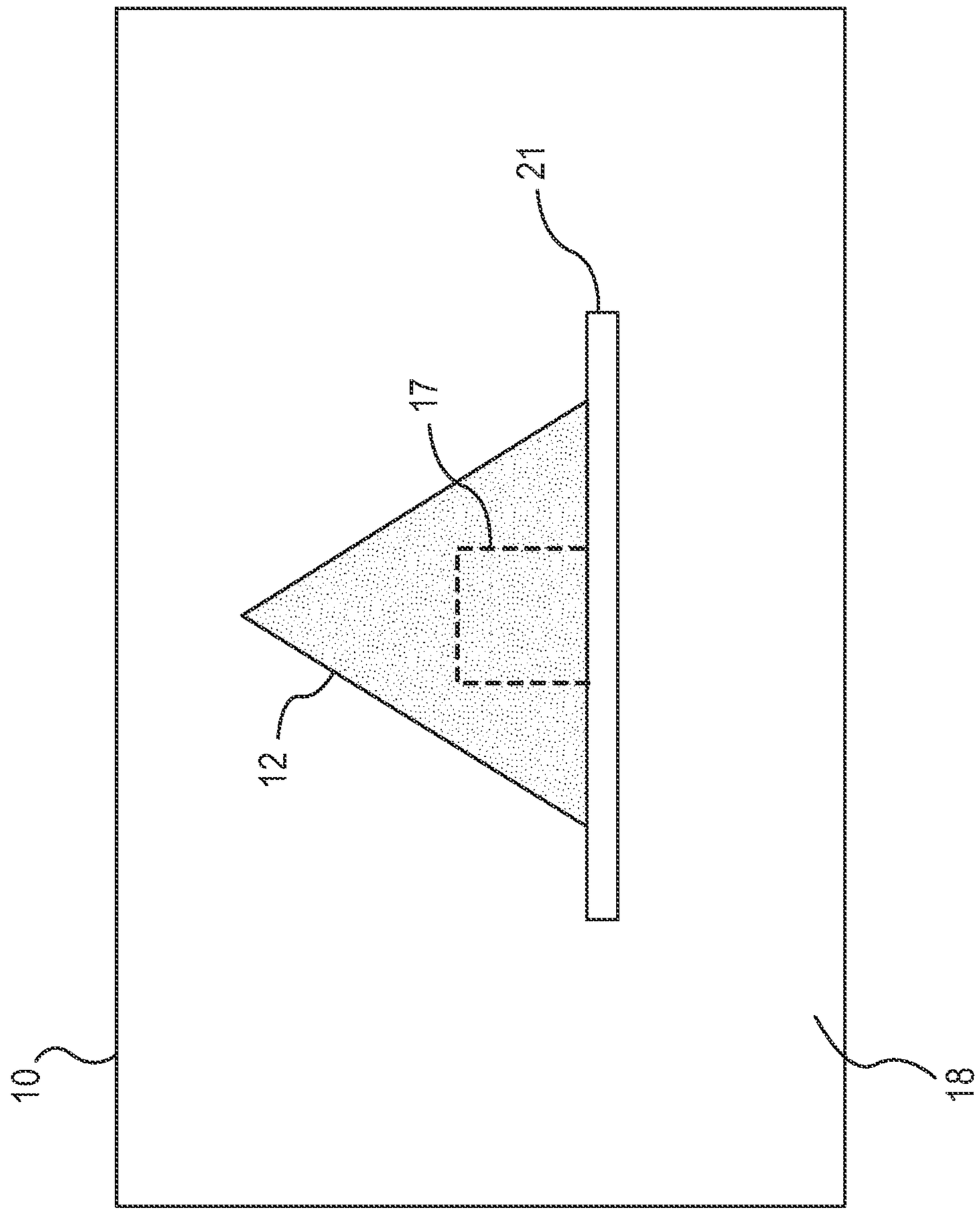



FIG. 8

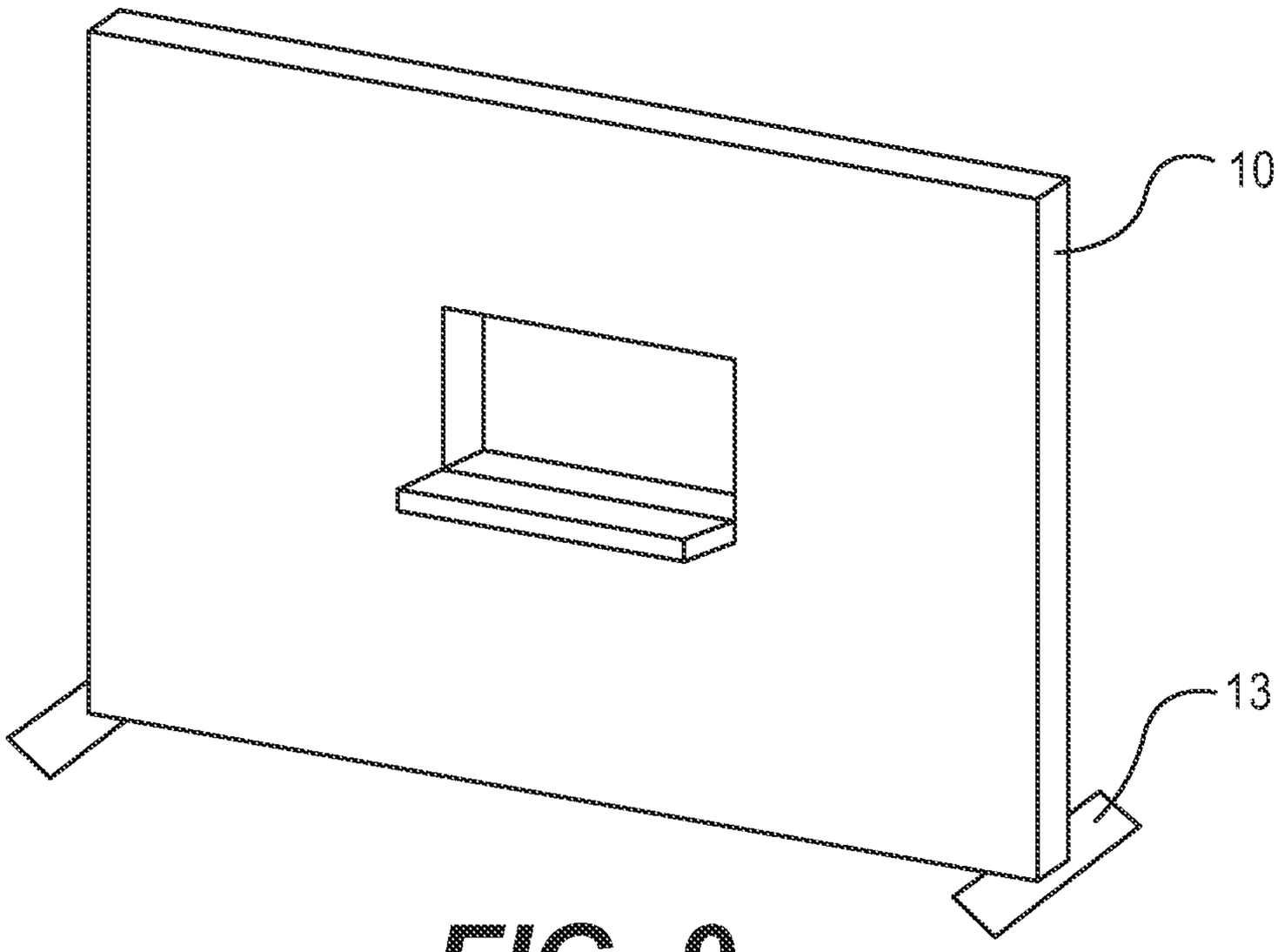



FIG. 9

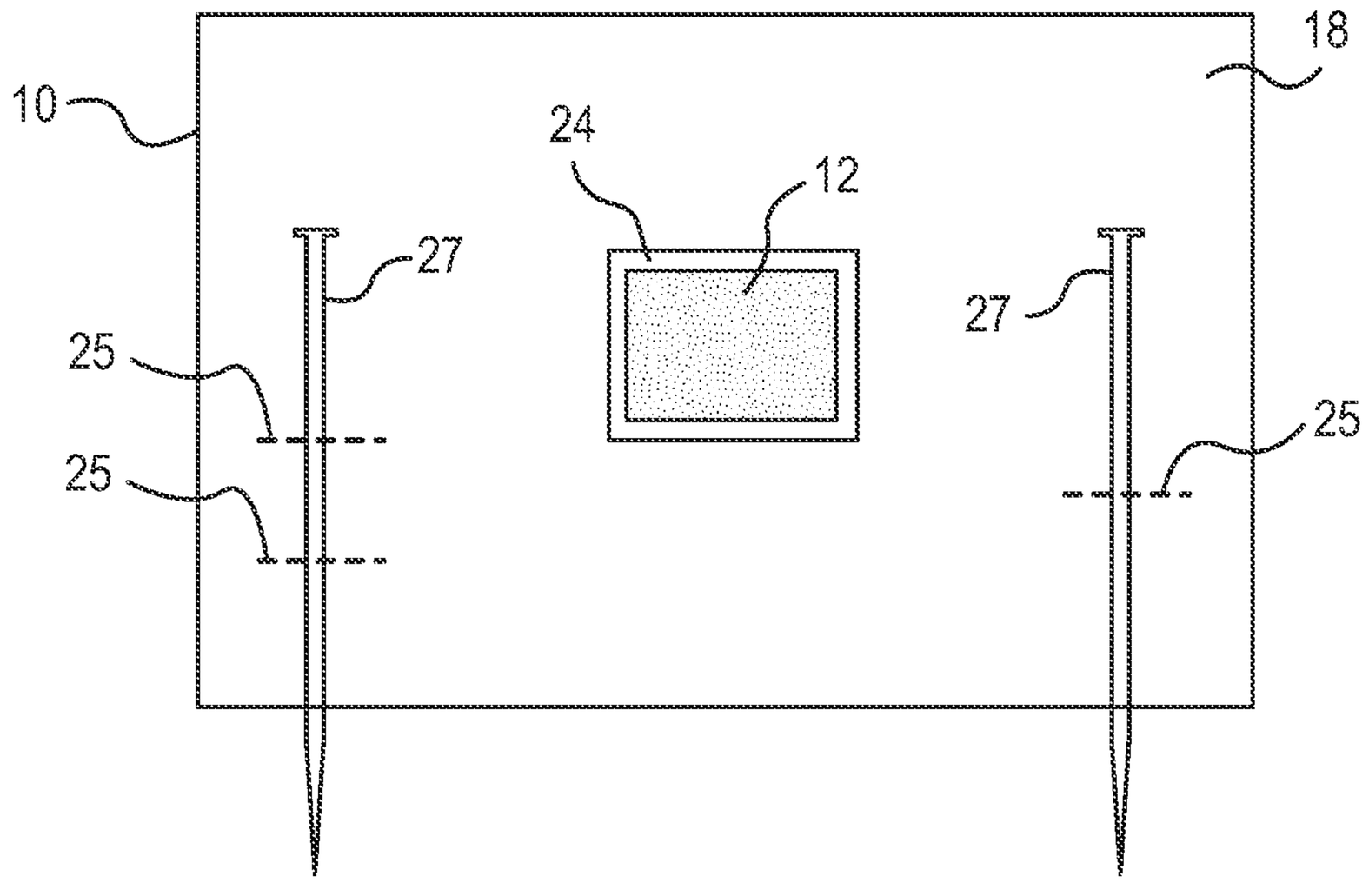
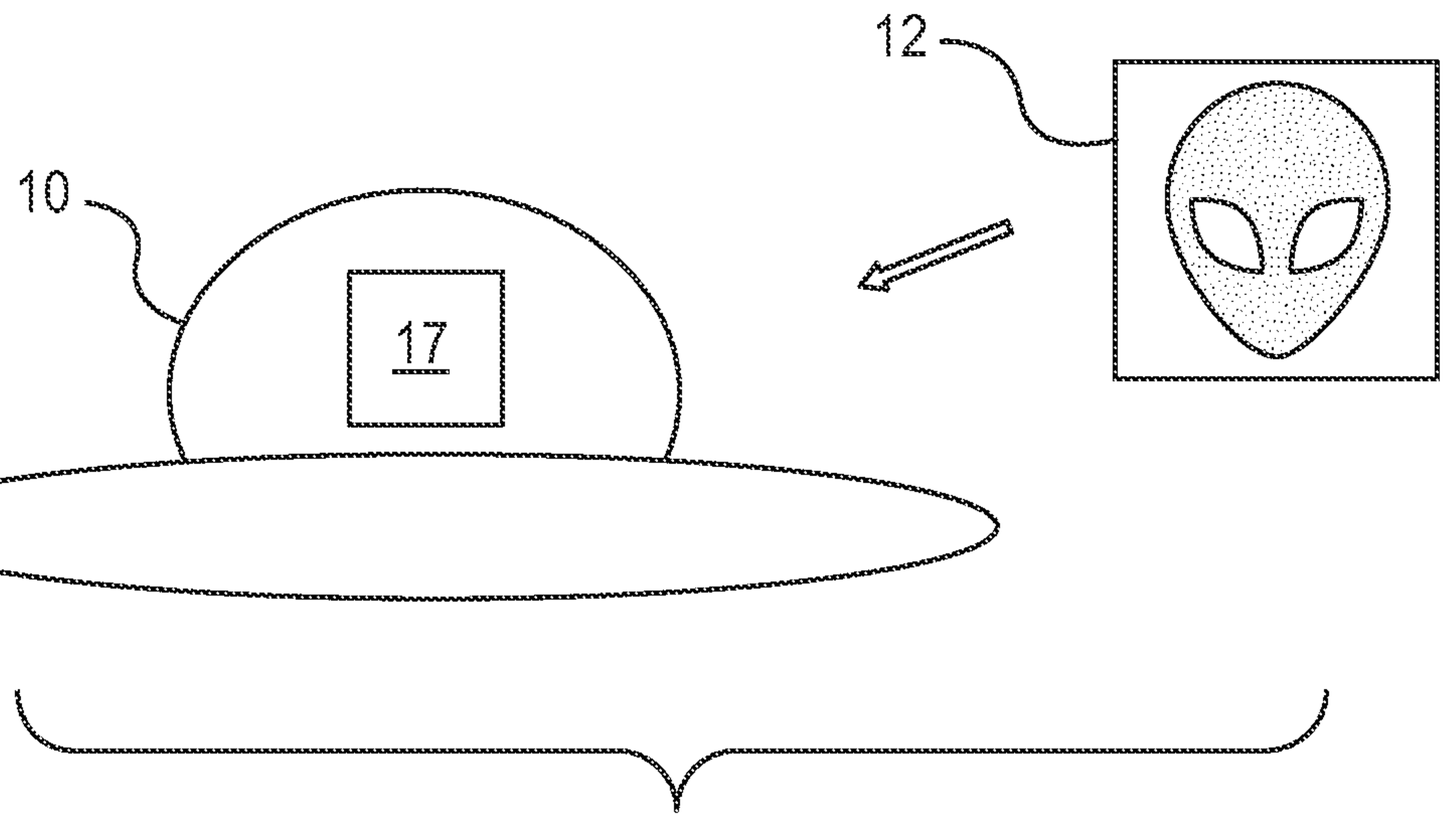



FIG. 10

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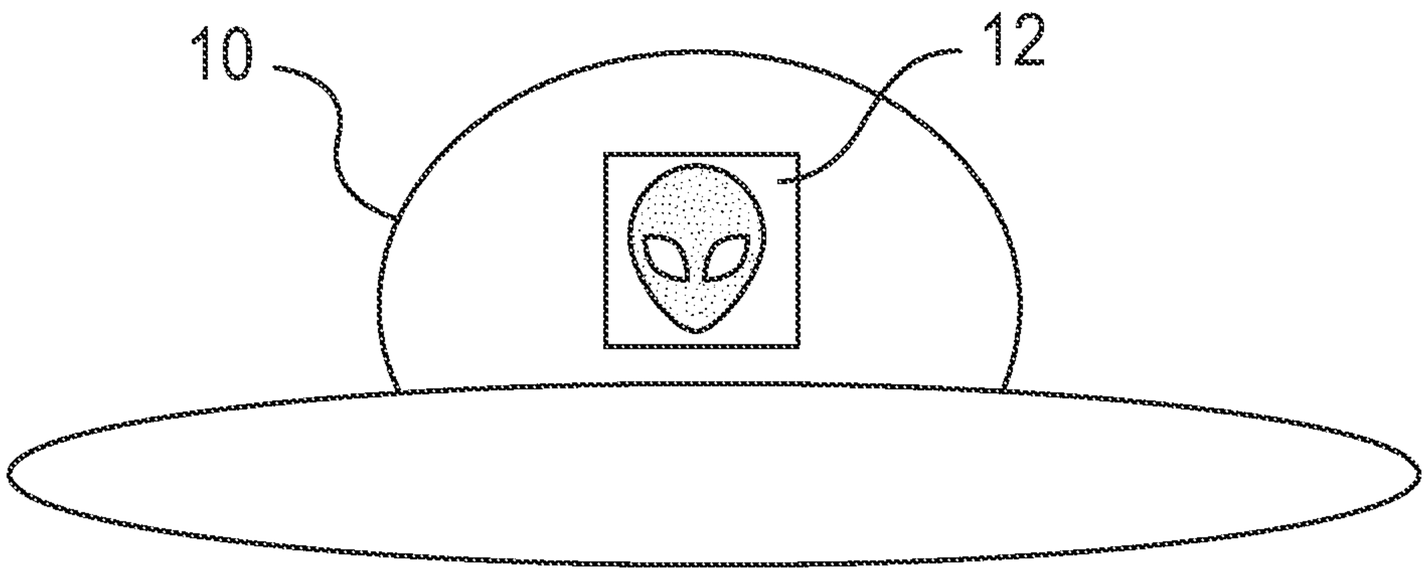


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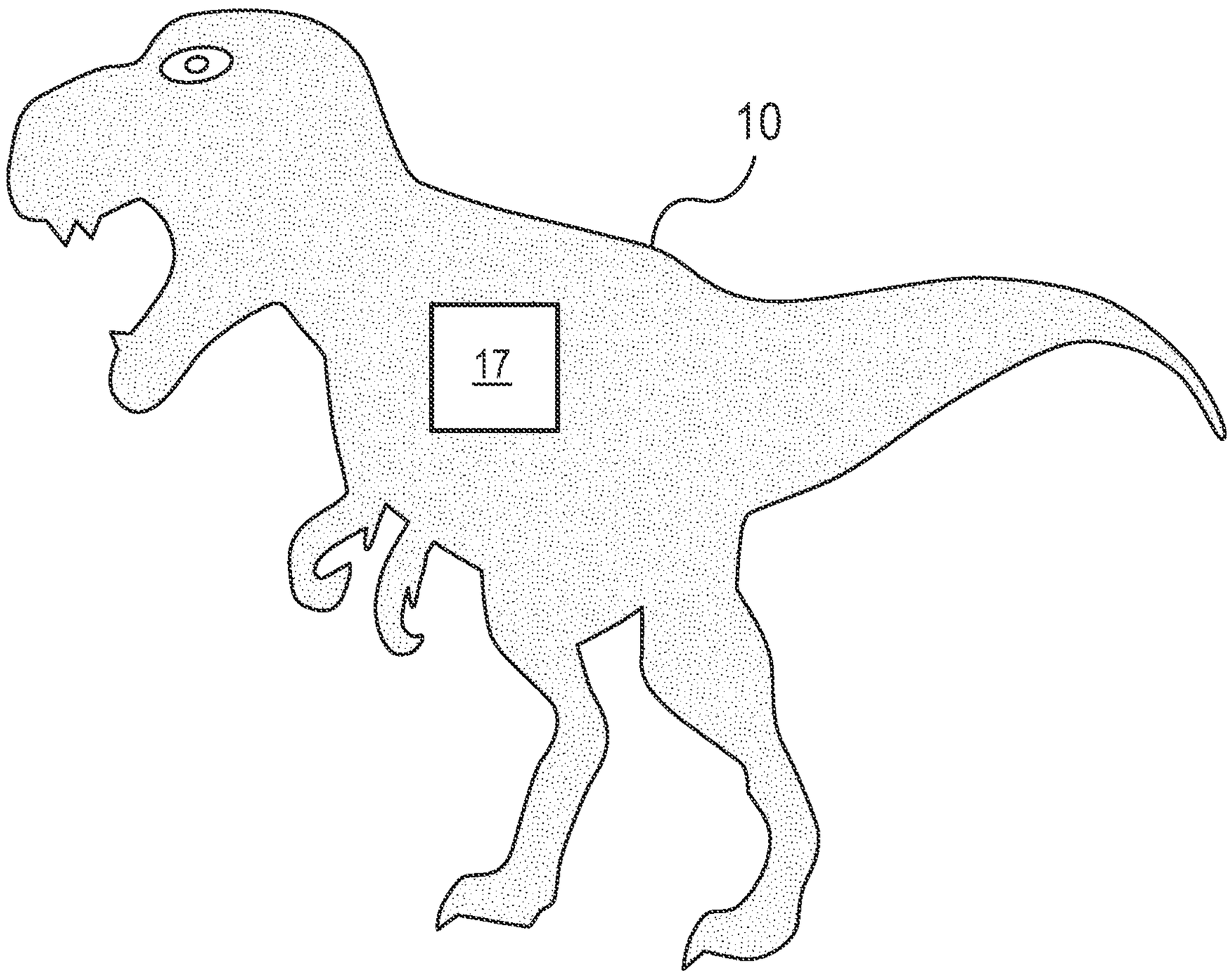



FIG. 13

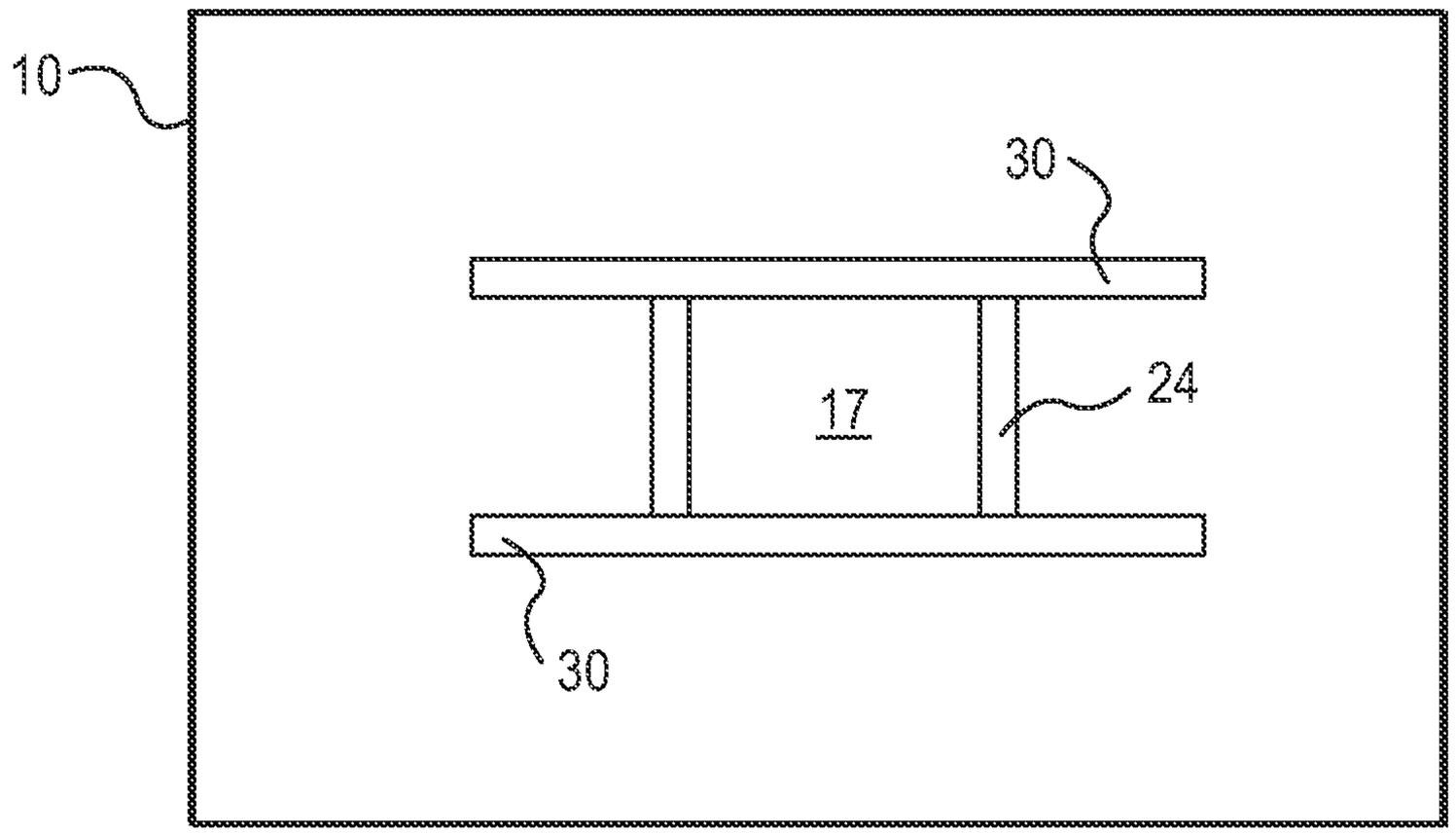



FIG. 14

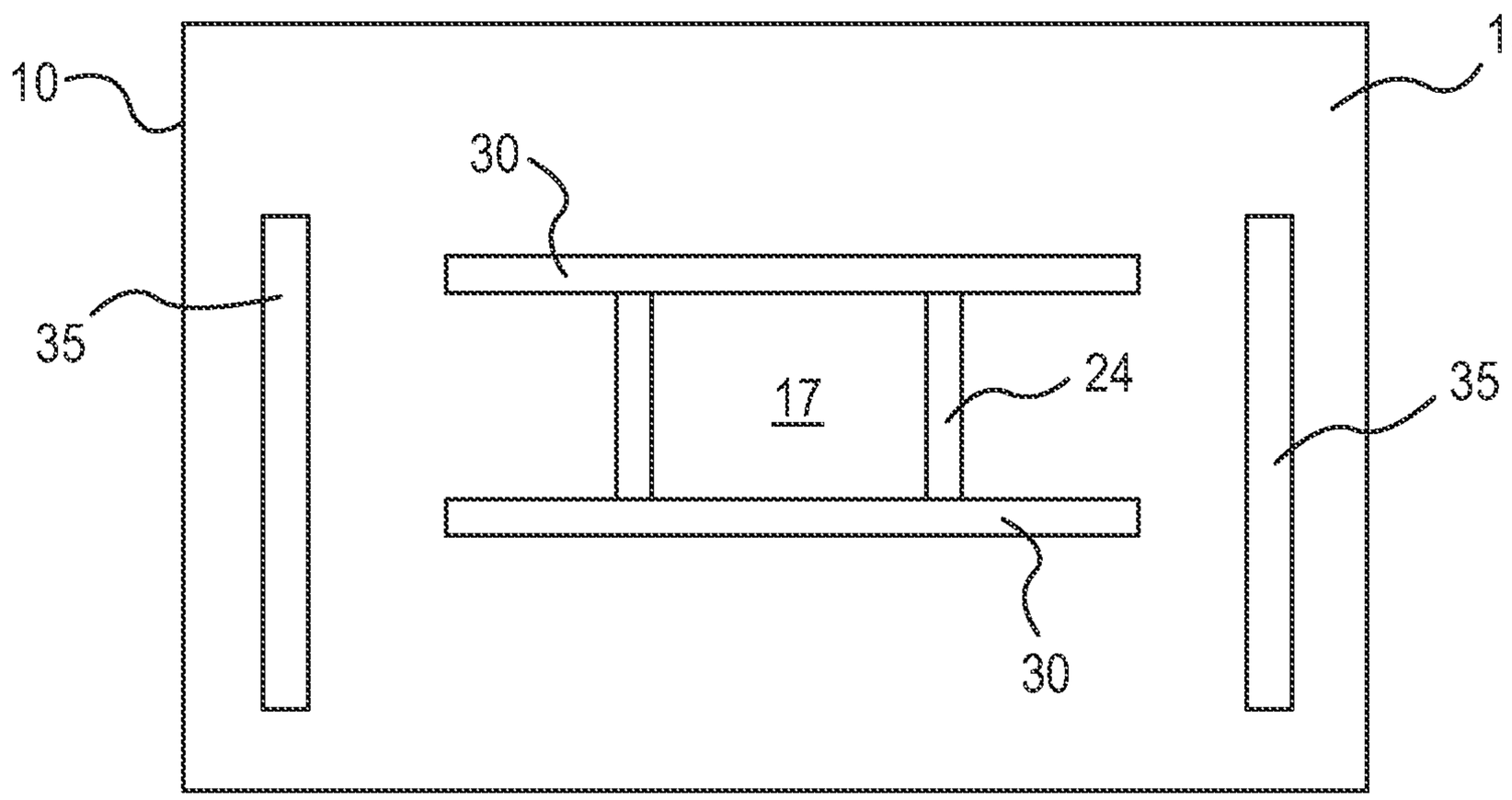



FIG. 15

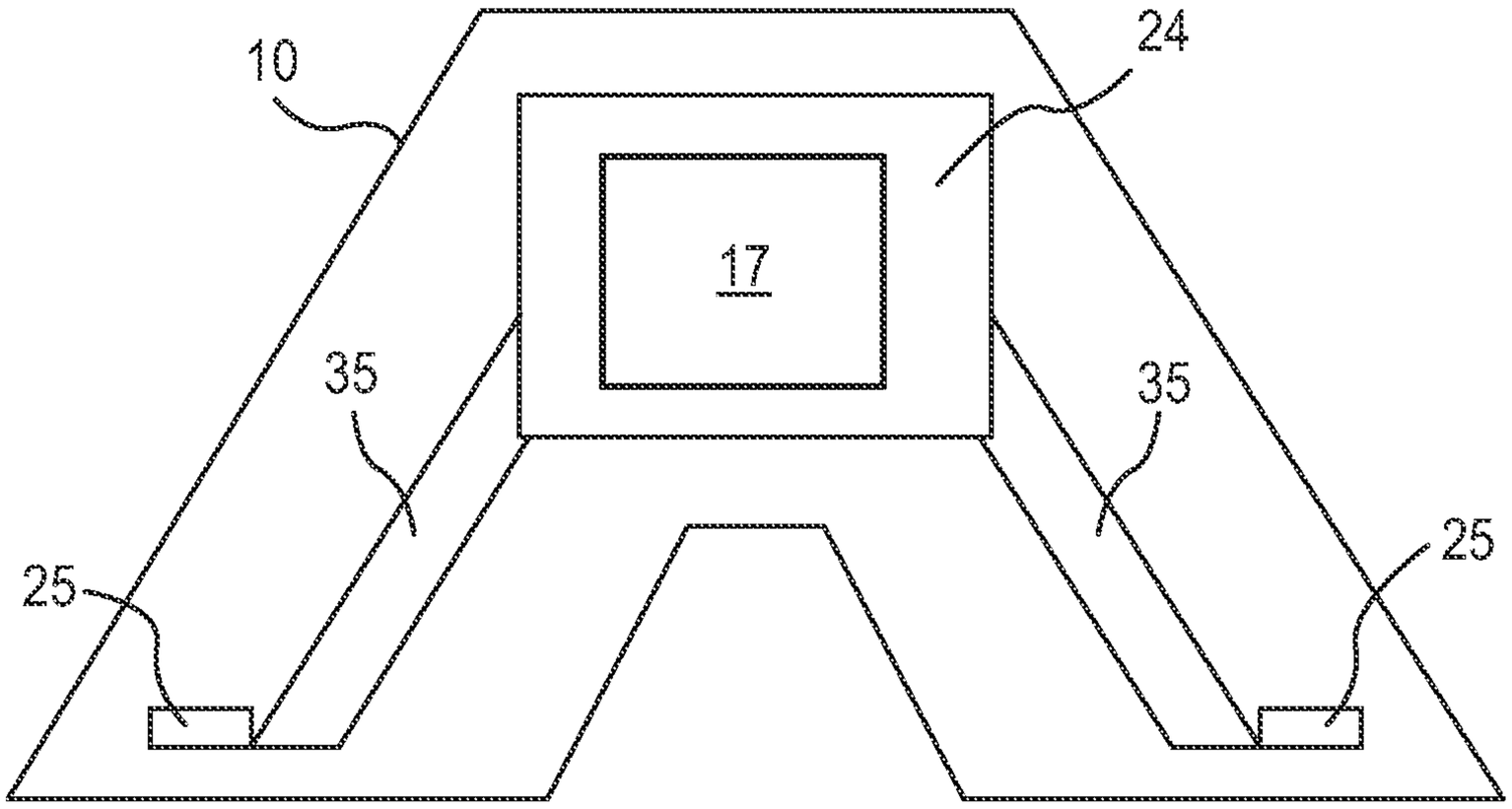



FIG. 16

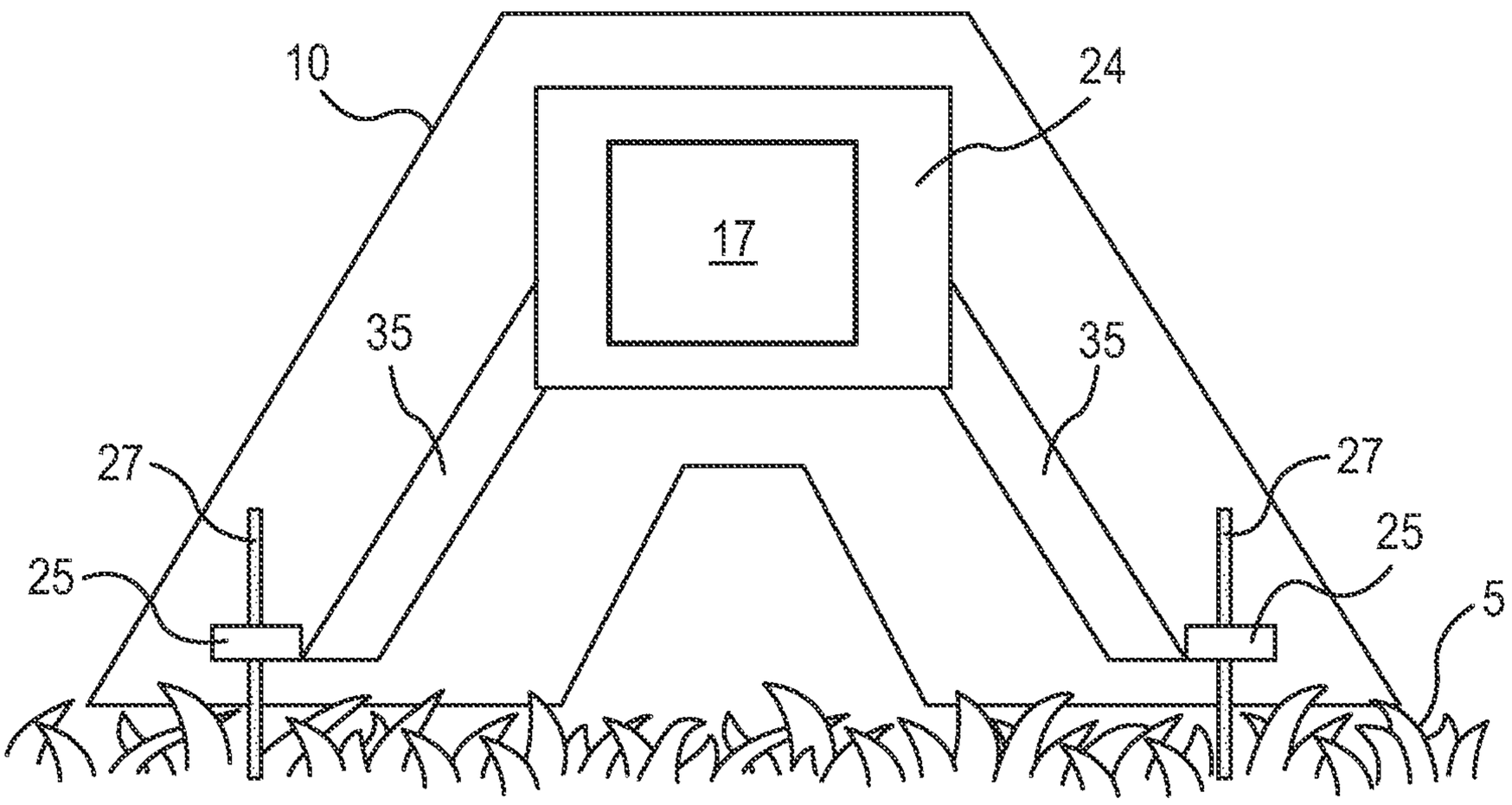



FIG. 17

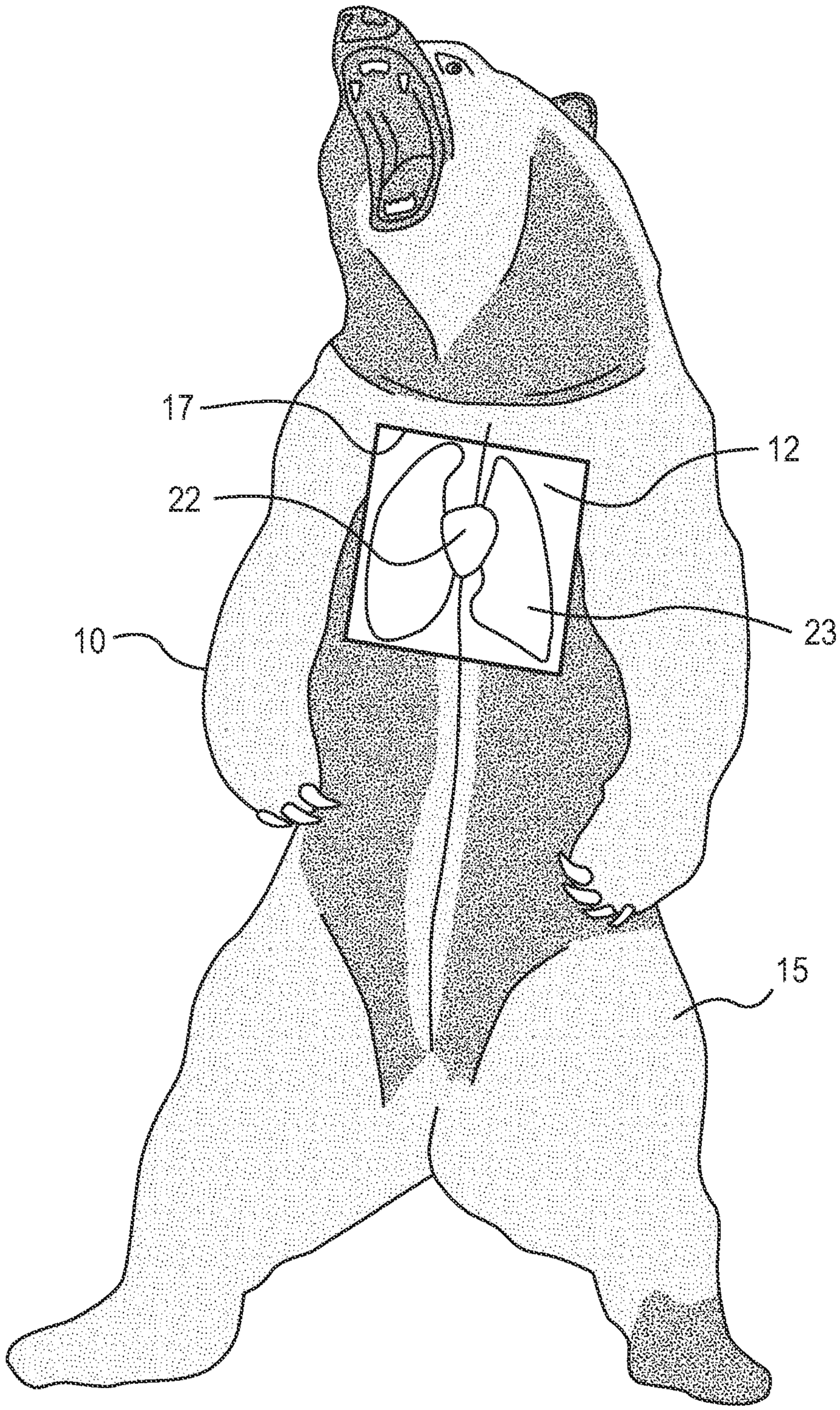



FIG. 18

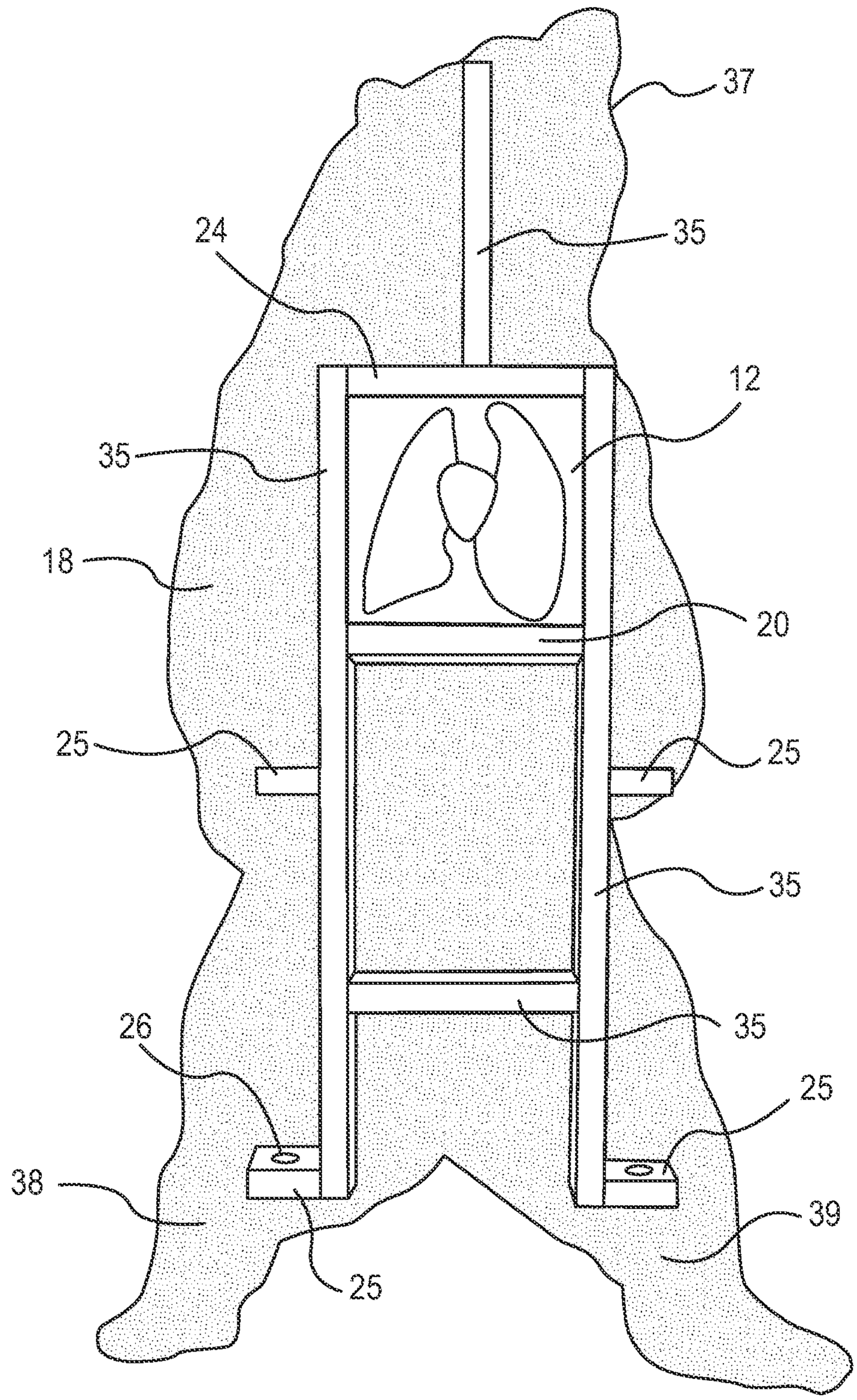



FIG. 19

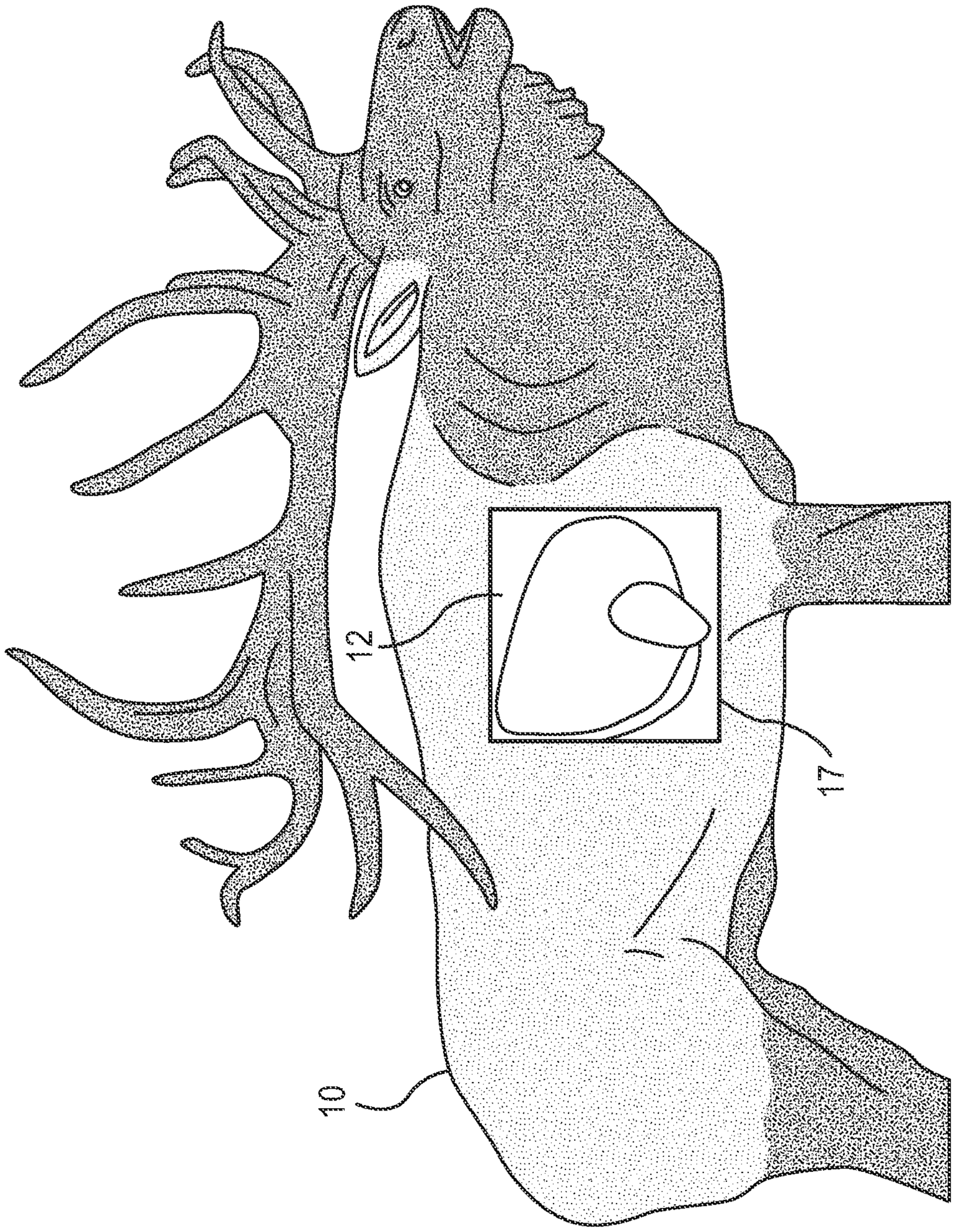
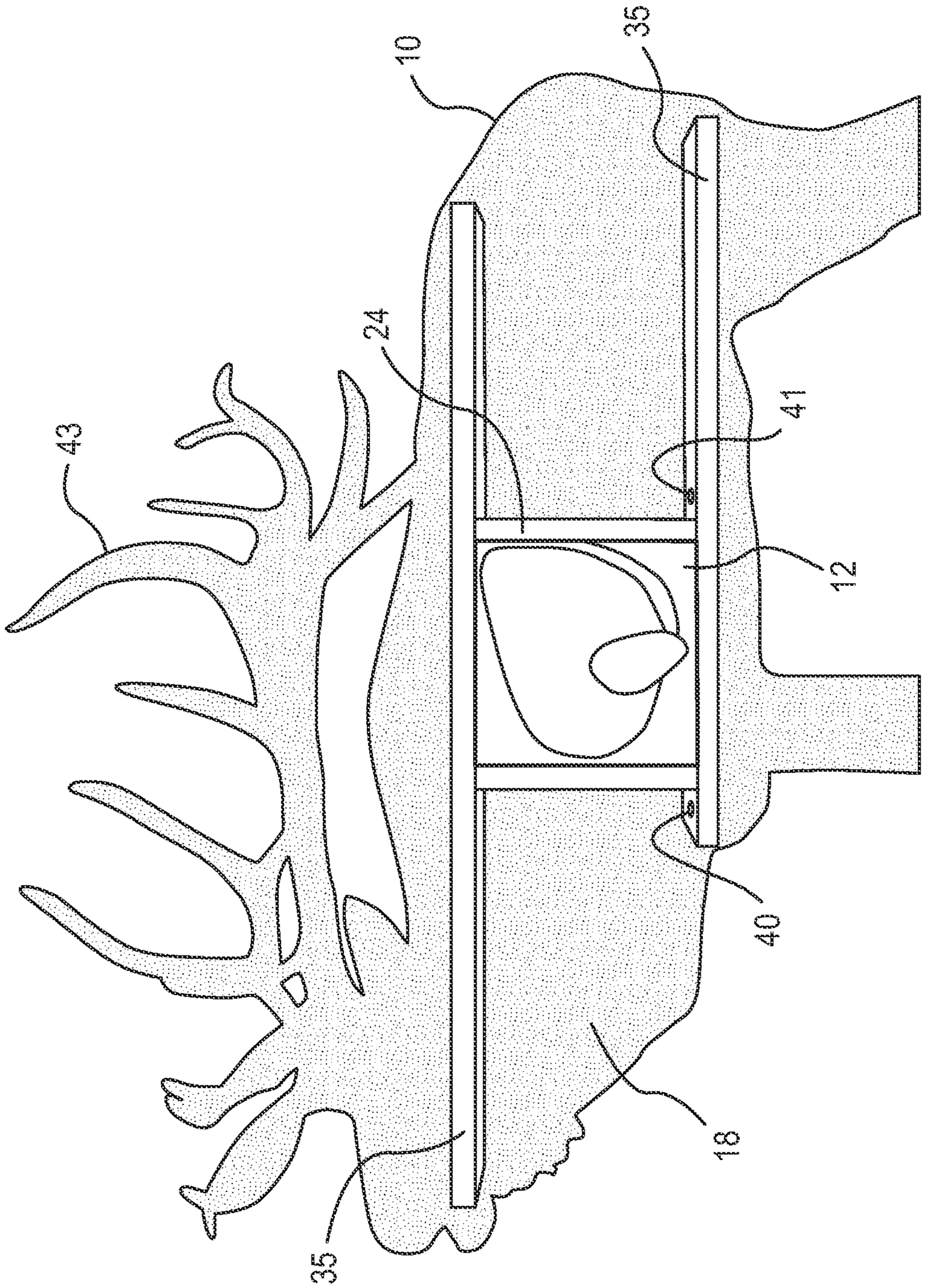



FIG. 20

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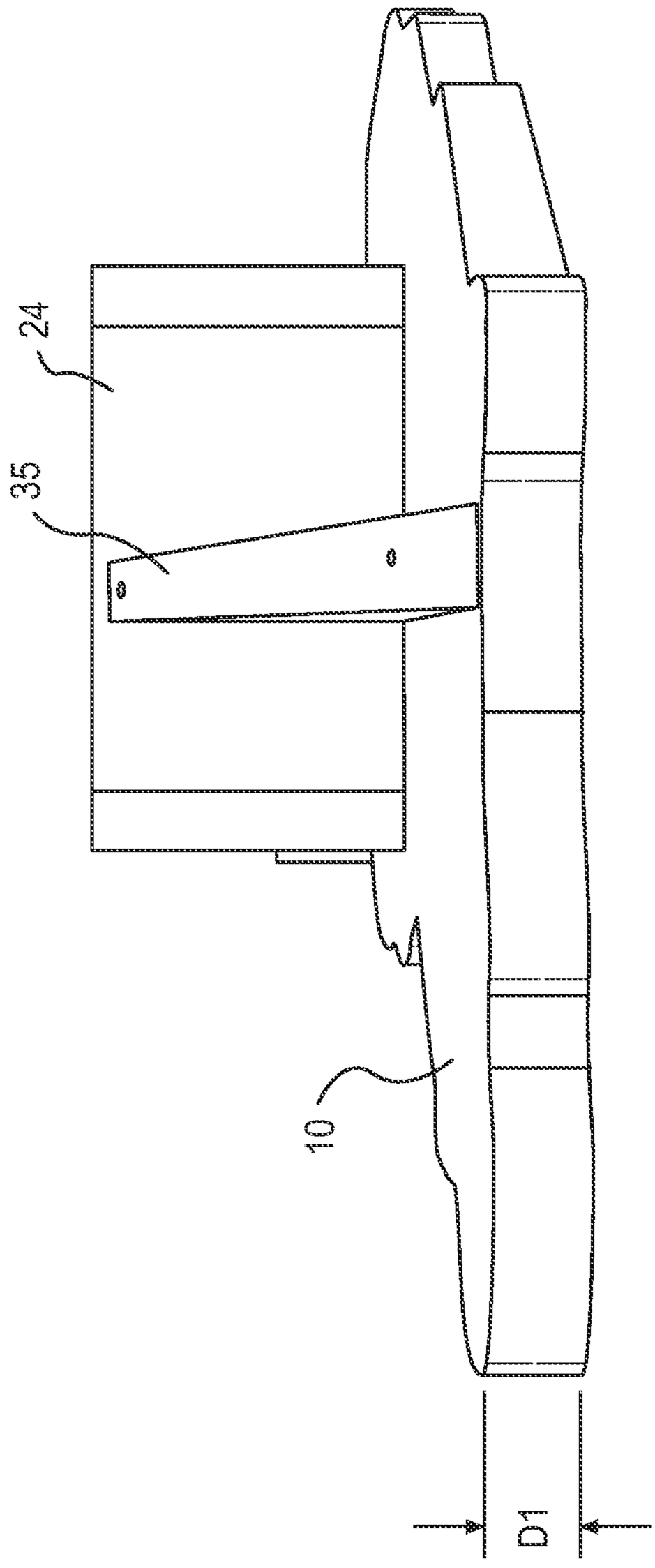


FIG. 22

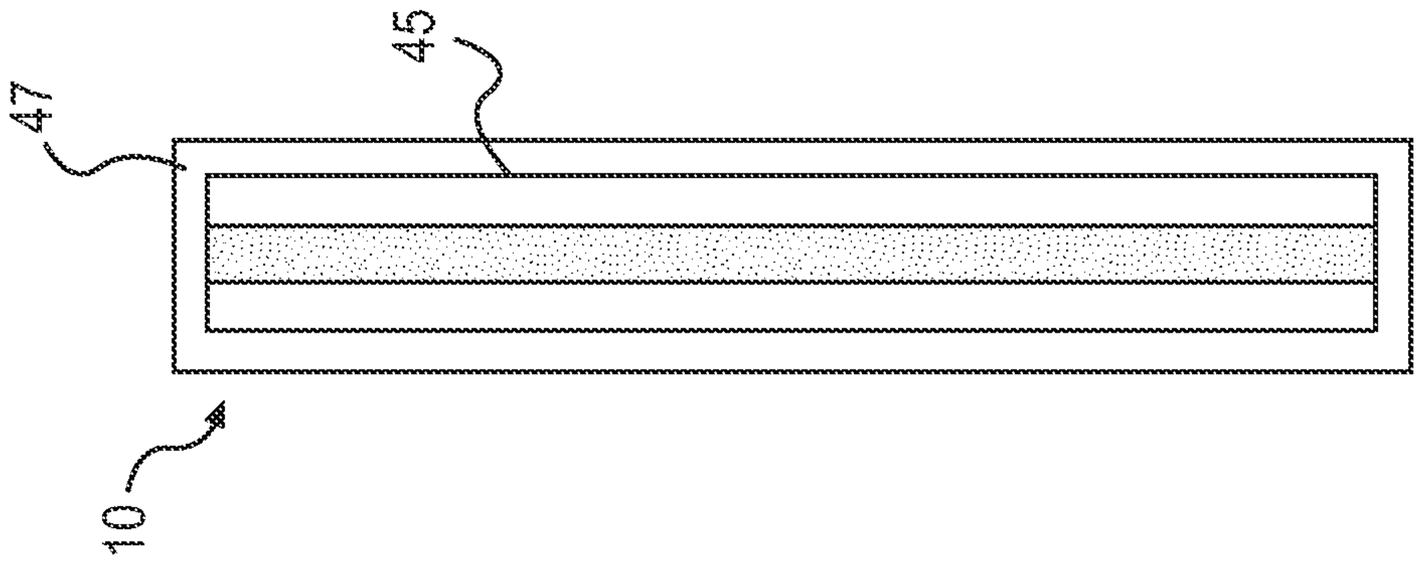


FIG. 26

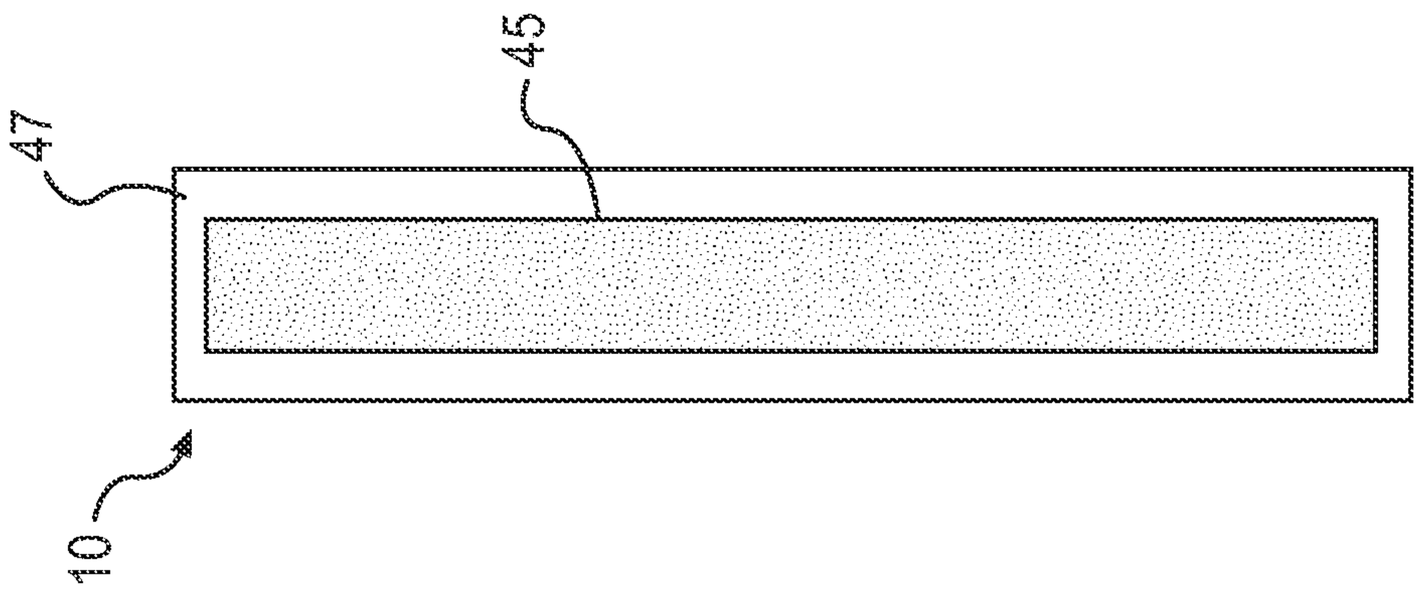


FIG. 25

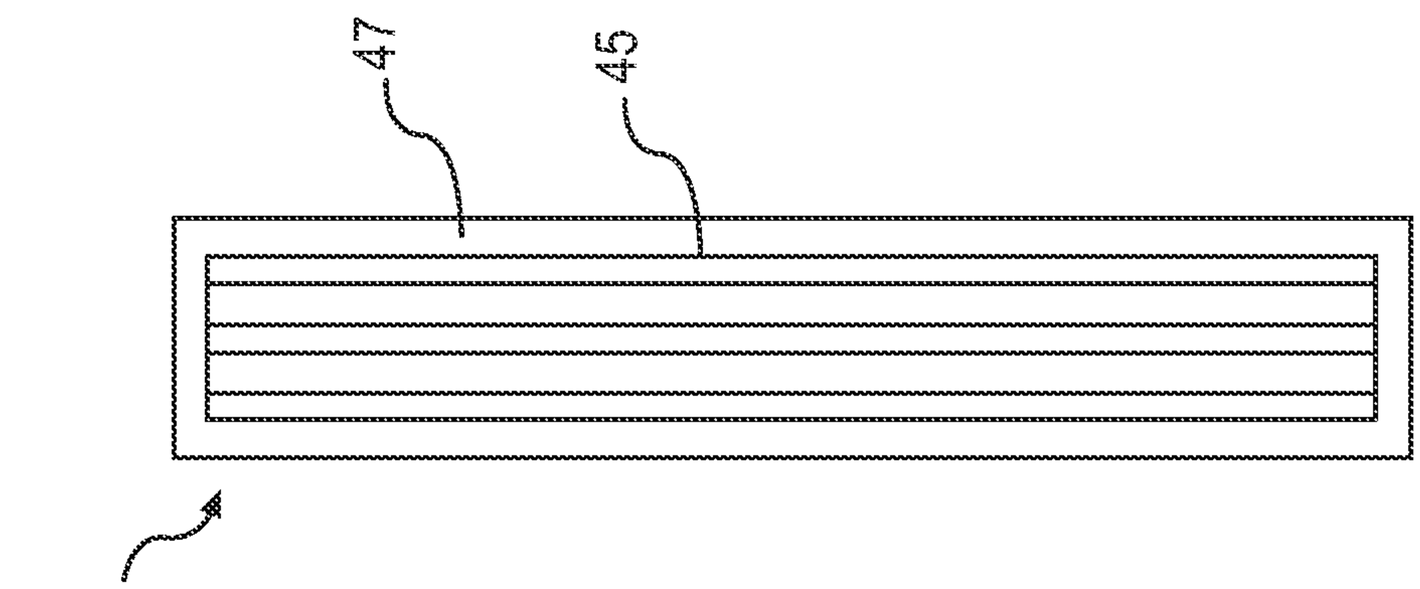


FIG. 24

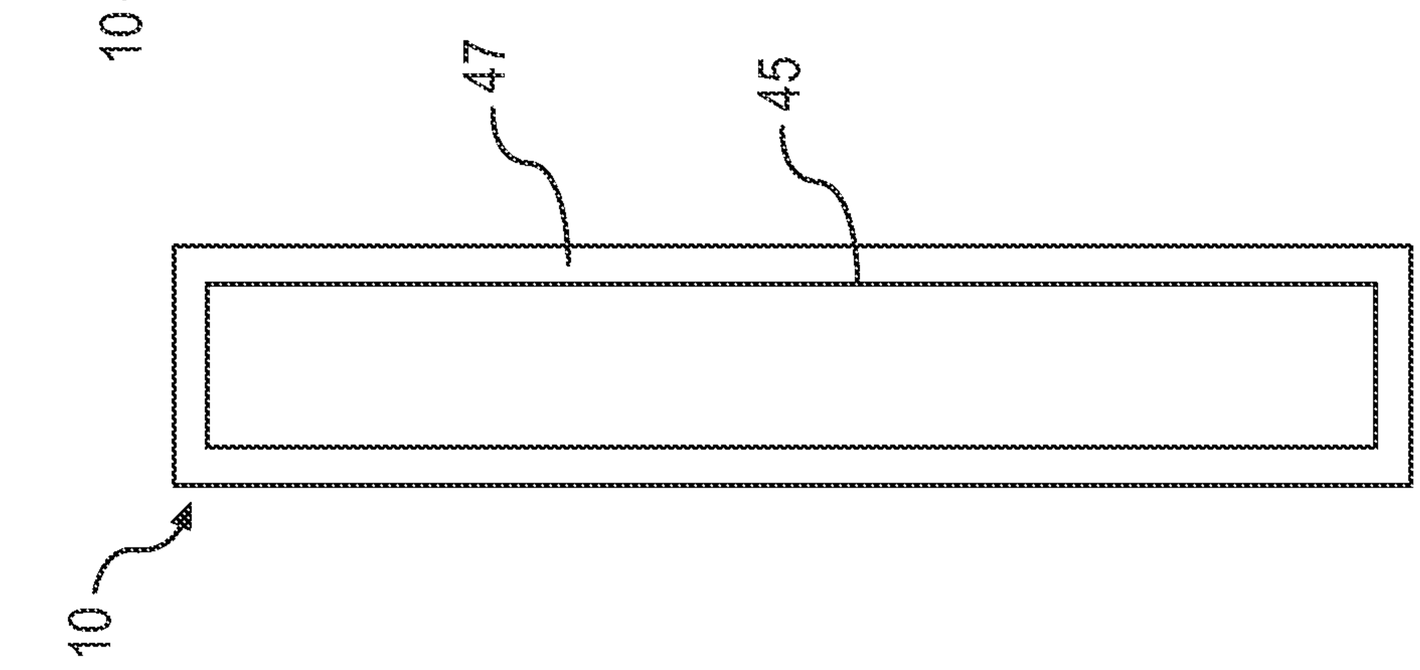


FIG. 23

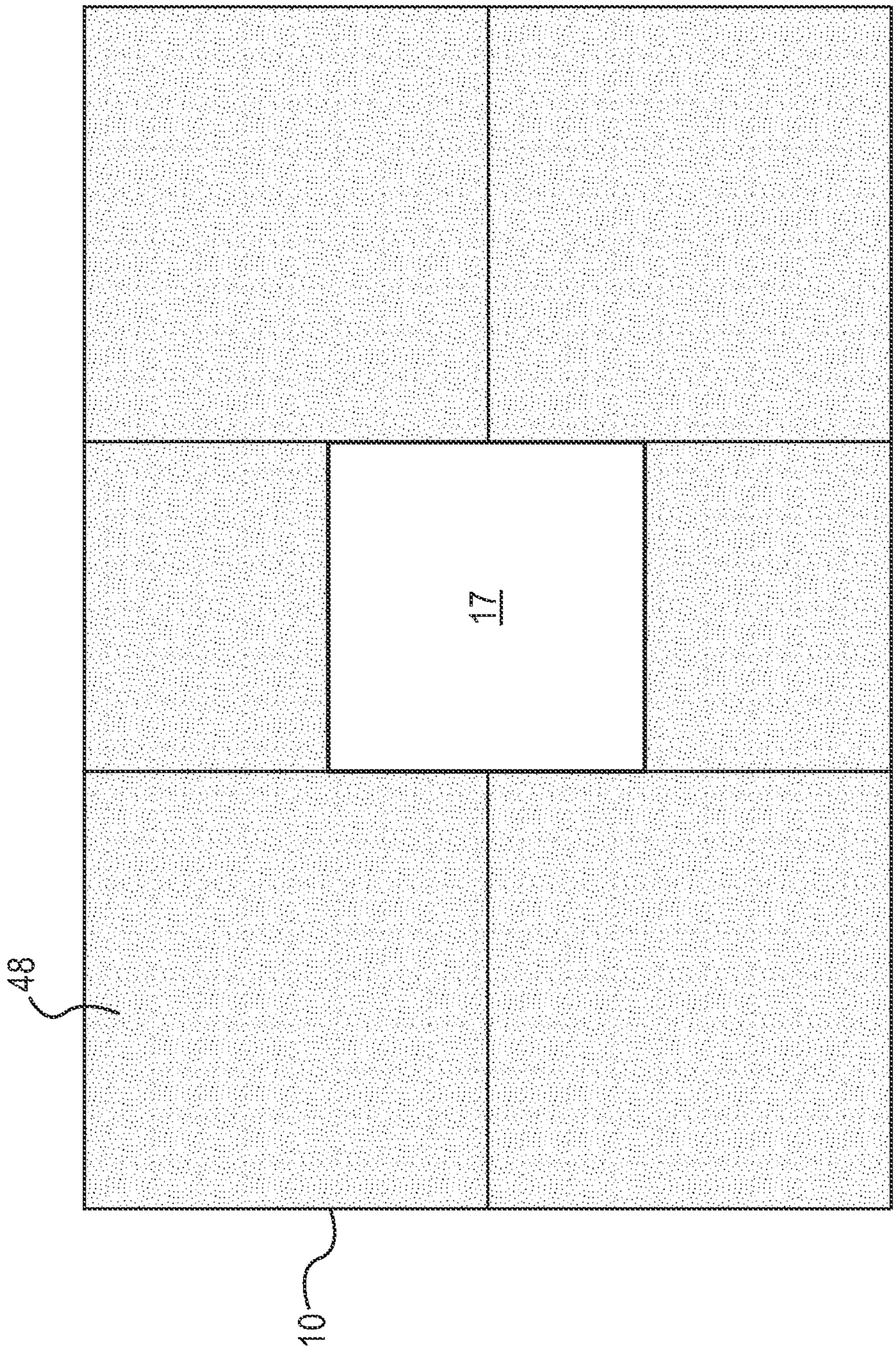


FIG. 27

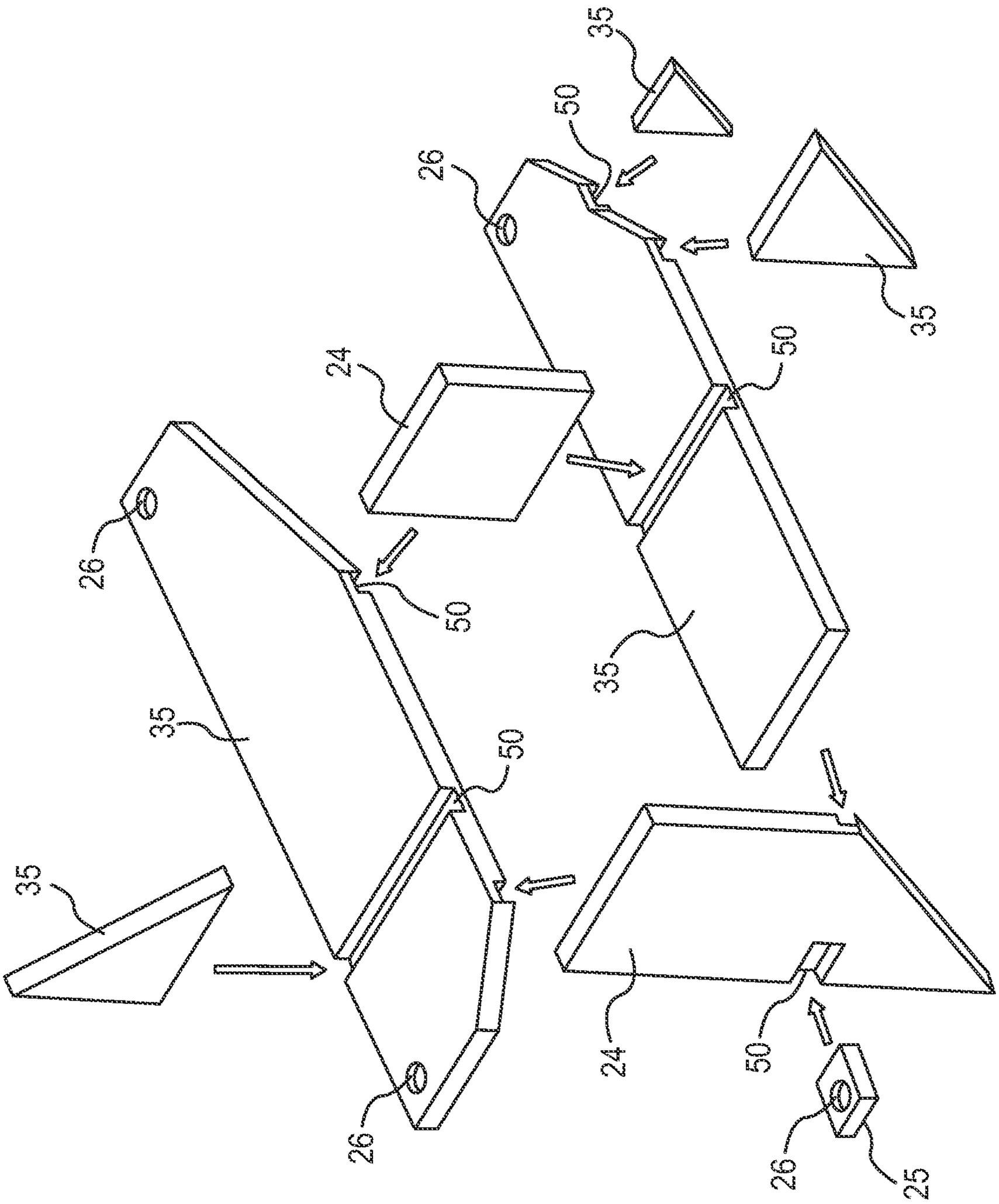


FIG. 28

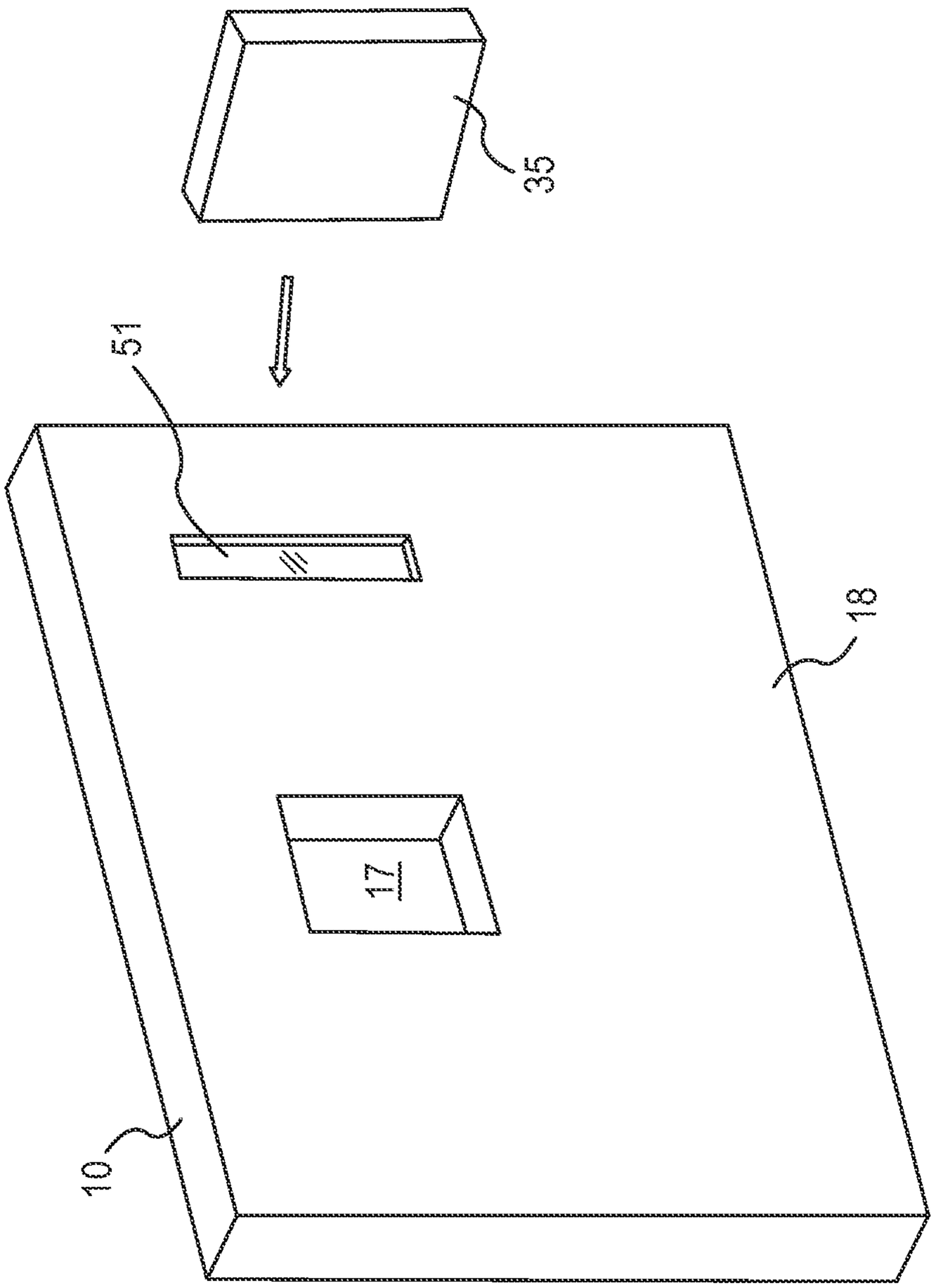


FIG. 29

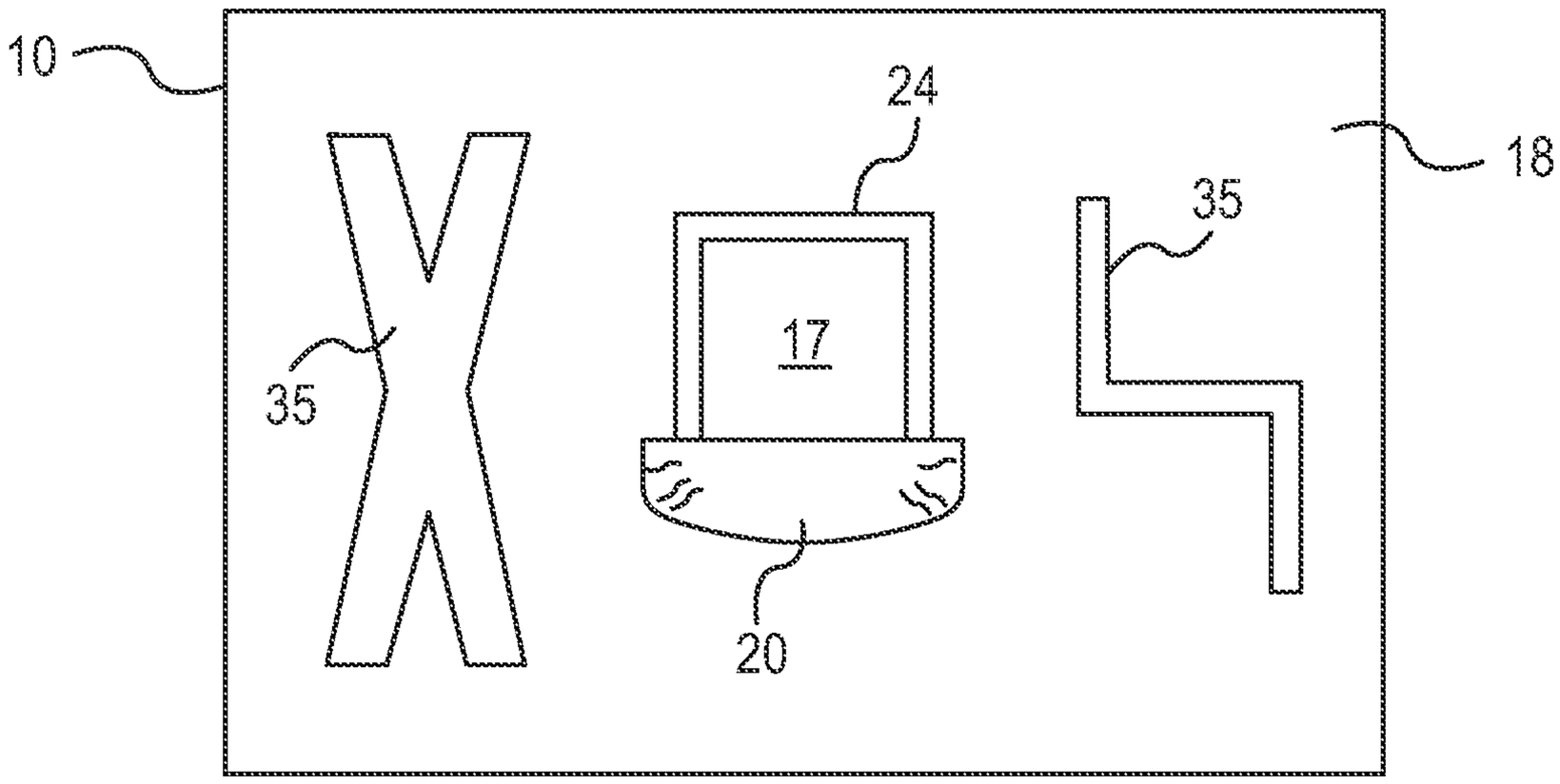


FIG. 30

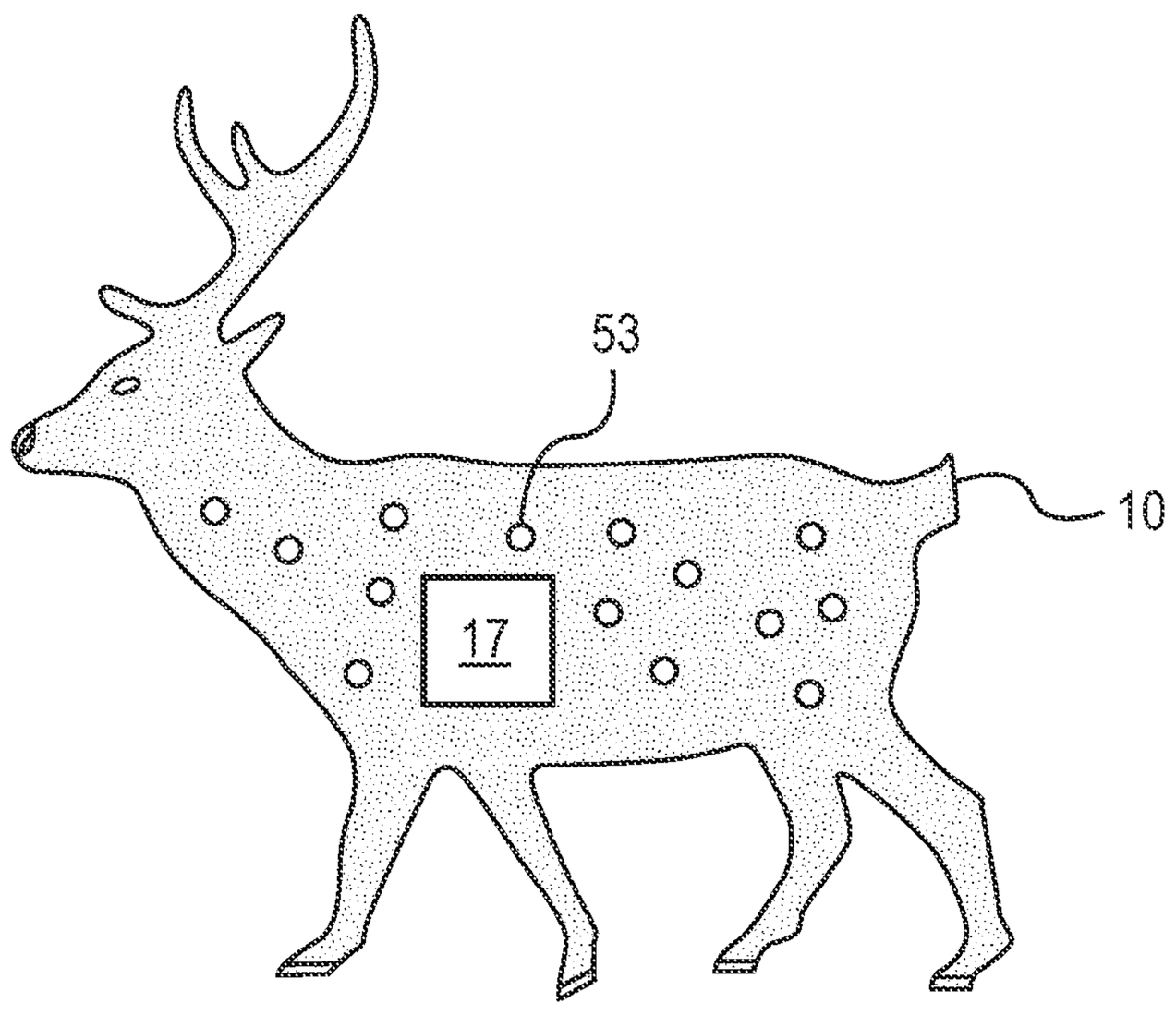


FIG. 31

# TARGET SUPPORT, SYSTEM AND METHOD

## CROSS-REFERENCE TO RELATED APPLICATIONS

The present application is a divisional application of U.S. patent application Ser. No. 15/931,381, filed on May 13, 2020, which is entitled to the benefit of the filing date of the prior-filed U.S. Provisional Patent Application No. 62/847,817, filed on May 14, 2019, the content of which is hereby incorporated by reference in its entirety.

## STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT

Not applicable.

## BACKGROUND OF THE DISCLOSURE

### 1. Field of the Invention

The application relates generally to targets including archery targets.

### 2. Background Art

Various targets are commercially available for enthusiasts of firearm shooting, archery and other aiming activities. Some targets are offered as a single or one-piece item. In other instances, targets are provided with a target holder portion that serves as a base structural support or frame for holding a replaceable aiming target portion. Some targets used by hunters are provided with a structural support portion in the form of a three-dimensional animal and a removable aiming target held by the support portion at one or more desired locations for aiming purposes. In other instances, a whole three-dimensional animal type structure may serve as a target. In the above examples, the target and/or target holder is often formed of molded foam having a shape resembling that of a game animal, e.g., a bear, deer, elk. Although offered as "life-size," many game animal targets are actually smaller than the size of the animal as encountered in the wild, which works against proper aiming or targeting of the animal for future real world encounters. While other three-dimensional animal-simulating targets may be more closely provided as "life-size," such targets are often costly to manufacturer according to their three-dimensional shape and are relatively expensive for consumers to purchase. Also, the molded foam used to construct the target and/or target holder may be subject to destruction over time resulting in additional replacement costs.

Still other hunting type targets are provided with overlays that simulate the perimeter shape and appearance of particular game animals and have openings there through representing areas of vital organs to be impacted by projectiles. Replaceable targets are typically located at the openings for targeting purposes. Such overlays are typically constructed from one or more solid materials such as wood, plastic, metal, or one or more lightweight materials such as foam and/or lightweight plastic. In certain instances, the materials of construction are sometimes provided as hard or solid resulting in structural damage to certain projectiles upon impact, e.g., arrows, spears, darts, etc. In other instances, the materials of construction are soft or too lightweight whereby one or more projectiles, e.g., arrows,



spears, darts, etc., pass through the overlay subjecting persons and objects located behind the overlay to being struck by such projectiles.

Overcoming the above shortcomings is desired.

## SUMMARY OF THE DISCLOSURE

The present disclosure is directed to a target system, including (1) one or more targets and (2) a support for the one or more targets including a main body having a front surface, a rear surface, one or more openings there through, one or more rear surface items including one or more landing surfaces operationally configured to hold the one or more targets at the one or more openings; wherein the main body includes an inner section and an outer section covering the inner section.

The present disclosure is also directed to a support for holding a projectile target, including (1) a main body having (a) an outlay design; (b) a front surface having an appearance corresponding to the outlay design; (c) an opening located along the main body according to the outlay design and front surface appearance of the main body; and (d) a rear surface; and (2) a frame type member secured to the rear surface of the main body and operationally configured to hold a projectile target at the opening, the frame type member including one or more elongated members further operable as backing members disposed along the rear surface according to the outlay design.

The present disclosure is also directed to a method of making a support for a projectile target, comprising (1) forming a main body of a support including one or more openings in the main body and one or more rear surface items from a single sheet of closed cell extruded polystyrene foam; (2) assembling the main body and one or more rear surface items to form an inner section of the main body; and (3) spraying a coating onto the main body and one or more rear surface items to form an outer section of the main body.

## BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING

FIG. **1** is a simplified front perspective view of an embodiment of the system of the present disclosure.

FIG. **2** is a simplified rear perspective view of an embodiment of a first member of the system of the present disclosure.

FIG. **3** is a simplified rear perspective view of an embodiment of a first member of the system of the present disclosure.

FIG. **4** is a rear exploded perspective view of an embodiment of a first member of the system of the present disclosure.

FIG. **5** is a rear exploded perspective view of an embodiment of a first member of the system of the present disclosure.

FIG. **6** is a front elevational view of an embodiment of a first member of the system of the present disclosure.

FIG. **7** is a rear elevational view of an embodiment of a first member of the system of the present disclosure.

FIG. **8** is a rear elevational view of an embodiment of a system of the present disclosure.

FIG. **9** is a front perspective view of an embodiment of a first member of the present disclosure.

FIG. **10** is a rear elevational view of an embodiment of the system of the present disclosure.

FIG. **11** is a front view of an embodiment of the system of the present disclosure.

FIG. **12** is a front elevational view of the system of FIG. **11** in an operating position.

FIG. **13** is a front elevational view of an embodiment of a first member of the present disclosure.

FIG. **14** is a rear elevational view of an embodiment of a first member of the present disclosure.

FIG. **15** is a rear elevational view of an embodiment of a first member of the present disclosure.

FIG. **16** is a rear elevational view of an embodiment of a first member of the present disclosure.

FIG. **17** is a rear elevational view of the first member of FIG. **16** including stake members set in the ground **5** in a manner effective to hold the first member in an upright position.

FIG. **18** is a front elevational view of an embodiment of a first member of the present disclosure provided in the appearance of a standing grizzly bear.

FIG. **19** is a rear elevational view of the first member of FIG. **18**.

FIG. **20** is a front elevational view of an embodiment of a first member of the present disclosure provided in the appearance of a standing elk.

FIG. **21** is a rear elevational view of the first member of FIG. **20**.

FIG. **22** is a top view of the first member of FIG. **18**.

FIG. **23** is a cross-sectional side view of an embodiment of a first member of the present disclosure.

FIG. **24** is a cross-sectional side view of an embodiment of a first member of the present disclosure.

FIG. **25** is a cross-sectional side view of an embodiment of a first member of the present disclosure.

FIG. **26** is a cross-sectional side view of an embodiment of a first member of the present disclosure.

FIG. **27** is a front elevational view of an embodiment of a first member of the present disclosure.

FIG. **28** is an exploded perspective view of rear side members of an embodiment of a first member of the present disclosure.

FIG. **29** is a rear perspective view of an embodiment of a first member and a corresponding backing member of the present disclosure.

FIG. **30** is a rear elevational view of an embodiment of a first member of the present disclosure.

FIG. **31** is a front elevational view of an embodiment of a first member of the present application provided in the appearance of a standing deer.

## DEFINITIONS USED IN THE DISCLOSURE

The term "at least one", "one or more", and "one or a plurality" mean one thing or more than one thing with no limit on the exact number; these three terms may be used interchangeably within this application. For example, at least one device means one or more devices or one device and a plurality of devices.

The term "about" means that a value of a given quantity is within ±20% of the stated value. In other embodiments, the value is within ±15% of the stated value. In other embodiments, the value is within ±10% of the stated value. In other embodiments, the value is within ±7.5% of the stated value. In other embodiments, the value is within ±5% of the stated value. In other embodiments, the value is within ±2.5% of the stated value. In other embodiments, the value is within ±1% of the stated value.

The term "substantially" or "essentially" means that a value of a given quantity is within ±10% of the stated value. In other embodiments, the value is within ±7.5% of the stated value. In other embodiments, the value is within ±5% of the stated value. In other embodiments, the value is within ±2.5% of the stated value. In other embodiments, the value is within ±1% of the stated value. In other embodiments, the value is within ±0.5% of the stated value. In other embodiments, the value is within ±0.1% of the stated value.

## DETAILED DESCRIPTION OF THE DISCLOSURE

For the purposes of promoting an understanding of the principles of the disclosure, reference is now made to the embodiments illustrated in the drawings and particular language will be used to describe the same. It is understood that no limitation of the scope of the claimed subject matter is intended by way of the disclosure. As understood by one skilled in the art to which the present disclosure relates, various changes and modifications of the principles as described and illustrated are herein contemplated.

It is to be understood that the present disclosure is not limited to particular embodiments. It is also to be understood that the terminology used herein is for the purpose of describing particular embodiments only, and is not intended to be limiting. As used in this specification and the appended claims, the term "arrow" may refer to one or more types of archery arrows according to the type of point provided. For purposes of this disclosure and as understood by persons of ordinary skill in the art of archery, exemplary arrow points include broadhead points, bullet points, field points, grabbing points, blunt points, and fishing points. In regard to firearm target shooting, the phrase "AR500" refers to AR500 steel plates commonly used as firearm targets. The initials "CNC" in regard to a CNC machine or CNC router machine stands for "Computer Numerical Control." As understood by the skilled artisan, the term "R-value" is commonly used in the United States of America ("U.S.A.") as a measure of a material's thermal resistance and "RSI" refers to R-value Systeme International, which is a measurement of a material's thermal resistance commonly used outside of the U.S.A. Herein, the phrases "fluid conduit" and "fluid line" may be used interchangeably. Herein, the phrase "fluid proportioner" refers to a dispensing system that receives separate fluid components, mixes the components in a predetermined ratio and then dispenses the components as an activated fluid composition. The phrase "plural component proportioning system" may be used interchangeably with the phrase "fluid proportioner." In reference to game animals, the term "realistic" means simulating the actual perimeter size and shape of a game animal when the game animal is situated in a particular desired orientation for being struck by one or more projectiles. The term "realistic" may further include simulating the physical look and appearance of a game animal.

In one aspect, the disclosure provides a system for use in a plurality of shooting and aiming endeavors. Non-limiting examples of shooting and aiming endeavors include firearm shooting, archery targeting, crossbow targeting, paintball gun shooting, sling and shot targeting, spear targeting, bean bag tossing, ball throwing, tennis, dart throwing, blow gun targeting, and combinations thereof.

In another aspect, the disclosure provides a target support for holding one or more projectile targets, the target support being shaped and sized to represent or otherwise depict a game animal in a realistic fashion for aiming practice purposes.

In another aspect, the disclosure provides a system for assisting in target practice across a plurality of shooting and

aiming endeavors including a target support and one or more removable projectile targets to be located at corresponding openings of the target support.

In another aspect, the disclosure provides a target support that may be constructed from one or more rigid materials and one or more flexible materials. The target support may include one or more outer coatings configured to cure on the surface of rigid and flexible materials.

In another aspect, the disclosure provides a support for a third party projectile target including, but not necessarily limited to a third party archery target constructed from polystyrene foam with an outer coating comprised of a polyurea and/or polyurethane spray coating applied to the polystyrene foam at a thickness effective to maintain the structural integrity of the polystyrene foam therein.

FIG. **1** provides a simplified illustration of an embodiment of a target system of the present disclosure. In this embodiment, the system includes a first member **10** (also referred to herein as a "main member" or "main body") and one or more second members **12** (also referred to herein as a "target" or "projectile target") removably paired with the first member **10** for system operation. Suitably, the first member **10** is operationally configured to hold or otherwise support one or more second members **12** in a fixed position for targeting purposes. In this embodiment, the first member **10** includes a front surface **15** and a rear surface **18** (see FIG. **2**) when oriented in an upright or substantially upright position, including a vertical position as shown. As further depicted, the first member **10** includes one or more openings **17** there through operationally configured to receive the one or more second members **12**. In the embodiment of FIG. **1**, the front surface **15** is shown as a planar surface. In another embodiment, the front surface **15** may be provided as a non-planar surface. Although the one or more openings **17** are configured as locations for the one or more second members **12**, it is contemplated that one or more openings **17** may be left devoid of corresponding second members **12** during system operation.

The first member **10** may also include one or more items disposed along the rear surface **18** for suitable operation of the first member **10**. One exemplary item disposed along the rear surface includes one or more landing surfaces or support members **20** corresponding to the one or more openings **17**. In the embodiment of FIG. **1**, the one or more support members **20** are disposed along a rear surface **18** of the first member **10** and operationally configured to hold one or more second members **12** at the opening **17** in a fixed position in a manner effective for the one or more second members **12** to act as an aiming target or projectile target at the opening **17**. Herein, to hold a second member **12** at an opening **17** may include holding a second member **12** in a mated position within an opening **17** or holding a second member **12** near an opening **17**. As discussed herein, a second member **12** may be provided as a removable consumable member to be replaced once the second member **12** is no longer useful as a workable projectile target, i.e., wear and tear to the second member **12**. However, it is also contemplated that the first member **10** and one or more second members **12** may be provided as a one-piece construction whereby the first member **10** and one or more second members **12** may be discarded as a single unit once the first member **10** and/or the one or more second members **12** are no longer useful as a workable target due to extended use.

In one embodiment, a support member **20** may include one or more ledge type members **21** at or near the lower portion of each opening **17** for supporting one or more second members **12** thereon (see FIG. **2**). In another embodiment, a support member **20** may include one or more frame type members **24** defining an opening **19** there through, each frame type member **24** being disposed along the perimeter of each opening **17** in a manner effective to support one or more second members **12** therein (see FIGS. **3** and **4**). In the embodiments of FIGS. **2-4**, the rear surface **18** is shown as a planar type surface wherein a support surface of the support member **20** may be defined by a plane perpendicular to the plane of the rear surface **18**. In another embodiment, the rear surface **18** and/or the support surface of the support member **20** may be provided as non-planar surfaces.

In one embodiment, a first member **10** and one or more support members **20** may be provided as a one-piece construction. In another embodiment, a first member **10** and one or more support members **20** may be provided as separate component parts to be secured together to form a one-piece member. Referring to FIG. **4**, in an embodiment including a separate support member **20** having one or more frame type members **24**, the one or more frame type members **24** may be provided in a one-piece configuration as shown securable to the rear surface **18** and/or secured to the perimeter inner surface **16** defining each of the one or more openings **17**. In another embodiment as shown in FIG. **5**, the one or more frame type members **24** may be comprised of an assembly of individual parts securable to the rear surface **18** and/or secured to the perimeter inner surface **16**.

The dimensions of the one or more openings **17** may be determined according to the dimensions of one or more particular second members **12** to be used as part of the system. In the embodiments of FIGS. **1-5**, the one or more openings **17** are depicted in a rectangular configuration. As such, a corresponding frame type member **24** may include a rectangular configuration with the same or substantially similar inner dimensions as the one or more openings **17** of the first member **10** and second member **12** to be set within the frame type member **24**. Other opening **17** configurations are also contemplated for use according to user preference and/or according to the size and shape of a desired second member **12** and/or the outlay design of the first member **10** and/or the front surface appearance of the first member **10**. Non-limiting examples of opening **17** configurations include rectangular openings with rounded corners, non-rectangular multi-sided openings, circular openings, oval openings, and irregular shaped openings (see FIG. **6**). Accordingly, any frame type member **24** provided as part of the first member **10** may include a size and shape the same or substantially similar as its corresponding opening **17** whereby the frame type member **24** is disposed at or near the perimeter inner surface **16** defining the corresponding opening **17**.

In one embodiment, the one or more second members **12** may include projectile targets provided as part of the present system. In such an embodiment, the size and shape of the one or more second members **12** may be manufactured for operating with one or more particular first members **10** and one or more openings disposed along the one or more first members **10**. In another embodiment, one or more second members **12** may include third-party marksman projectile targets of one or more sizes and/or shapes corresponding to one or more openings **17** formed in the first member **10** and the corresponding frame type members **24** if and when included as part of the system. Without limiting the invention, one suitable third-party marksman projectile target may include an archery target commercially available from the following exemplary sources: Morrel Targets, Morrel Manufacturing, Alma, Arkansas, U.S.A.; Bulldog Archery Targets, Winnipeg, Manitoba, Canada; Block® Targets, FeraDyne Outdoors, L.L.C., Superior, Wisconsin, U.S.A. The skilled

artisan will appreciate that the above list of commercial sources of archery targets is not meant to be exhaustive. Another exemplary third-party marksman projectile target may include a firearm target including, but not necessarily limited to an AR500 target commercially available from ShootSteel.com, Ramsey, Minnesota, U.S.A; and AR500 Target Solutions, Rice Lake, Wisconsin, U.S.A.

As shown in FIG. **7**, one frame type member **24** may include an inner surface **29** providing a snug type fit for at least part of a second member **12** where at least part of the outer surface of the second member **12**, i.e., the top, bottom, right and left sides of the second member **12**, lies in abutment with the inner surface **29** of the frame type member **24**, i.e., the uppermost inner surface, the lowermost inner surface, the opposing inner side surfaces. In one embodiment, at least part of the second member **12** may lie in abutment with at least part of the perimeter inner surface **16** of an opening **17** and at least part of the second member **12** may lie in abutment with at least part of the inner surface **29** of a corresponding frame type member **24**. For example, at least part of a second member **12** may rest atop the perimeter inner surface **16** and a least part of the second member **12** may rest atop the lowermost inner surface of a corresponding frame type member **24**. In another embodiment, the inner dimensions of the frame type member **24** may be greater than the outer dimensions of a corresponding second member **12**. In an embodiment where a support member **20** is provided as a ledge type member **21**, the second member **12** may be larger dimensionally than a corresponding opening **17** of the first member **10**. Accordingly, the shape of the second member **12** may vary from the shape of the opening **17** and still provide a target surface disposed across the entire opening **17** (see the triangular shaped second member **12** disposed across the rectangular opening **17** in FIG. **8**).

Suitably, the first member **10** may be held in an upright or substantially upright fixed position during use as desired. In one embodiment, the lowermost portion of the first member **10** may be set in a dugout portion of earth or ground **5** and held in a fixed position therein. In another embodiment, wall type structures, e.g., roofed structures, fences, gates, and/or other items such as large rocks, logs, vehicles, farm equipment, trees, bushes, posts, and/or other objects may be used to hold a first member **10** in an upright or substantially upright fixed position. In one particular embodiment as shown in FIG. **9**, the first member **10** may include one or more bases **13** operationally configured to maintain a first member **10** in an upright fixed position—shown here as a vertical fixed position. In another embodiment as shown in FIG. **10**, a first member **10** may include one or more stake holders **25** disposed along the rear surface **18** and/or front surface **15**, the one or more stake holders **25** having openings **26** for receiving stake members **27** there through. Without limiting the invention, suitable stake members **27** of the present system may include, but are not limited to plastic spikes, metal spikes, wooden spikes, piping, rebar, T-posts, spiral or corkscrew ground base anchors, other items that are ground **5** penetrable, and combinations thereof.

For purposes of this disclosure, the first member **10** may be built to scale, i.e., the first member **10** may be provided in any size and/or shape as desired or as otherwise required for one or more operations. As shown in FIGS. **1-10**, the first member **10** may be provided having a rectangular perimeter shape. In another embodiment, the first member **10** may include a non-rectangular perimeter shape, e.g., a multi-sided shape, a circular shape, an oval shape, an irregular shape. In another embodiment, the first member **10** may include a perimeter shape replicating an animate or inanimate object, life size or otherwise as may be desired or otherwise required for one or more aiming or targeting practices. As one non-limiting example, a first member **10** may include a shape of a flying saucer with an opening **17** operationally configured for operation with a second member **12** having a surface depiction of a space alien thereon for aiming purposes (see FIGS. **11** and **12**). In addition, the front surface **15** of a first member **10** may include indicia such as an arrangement of colors, patterns, and designs visually displaying the look and appearance of a particular animate or inanimate object. The present system may also be used for military training applications wherein a first member **10** may be provided in the size, shape and indicia of enemy combatants and items such as machinery, e.g., vehicles, tanks, planes, as well as structures such as buildings, military towers, tents, and the like.

In another embodiment, the first member **10** may include a perimeter shape and/or a front surface **15** with indicia to provide a fictional character, e.g., cartoon characters, comic book characters, or other fictional entities such as ghosts, vampires, elves, giants, the grim reaper, wizards, dragons, and any other character or entity as may be left to the user's imagination. The first member **10** may also include a perimeter shape and/or a front surface **15** with indicia to provide a non-fictional character, e.g., knights, gladiators, mammoths, and any other character or entity as may be left to a user's imagination (see FIG. **13**, which includes a first member **10** with a perimeter in the shape and surface details of a dinosaur as recognized by the general public as well as persons of ordinary skill in the art of paleontology).

In another embodiment, one or more frame type members **24** may further act as structural reinforcements providing added structural strength to a first member **10**. As shown in FIG. **14**, one frame type member **24** may include one or more elongated sections **30** extending out from the rectangular frame type member **24** in one or more desired directions along the rear surface **18** of the first member **10**, the one or more elongated sections **30** being operationally configured to provide structural strength to the first member **10**. In another embodiment, the first member **10** may include one or more additional reinforcements or backing members **35** including, for example, one or more backing members **35** disposed along the rear surface **18** operationally configured to provide added structural strength to the first member **10** (see FIG. **15**). As shown in FIG. **15**, the one or more backing members **35** may be set apart from the frame type member **24** (or ledge type member **21**). In another embodiment, one or more backing members **35** may contact or be connected to the frame type member **24** or ledge type member **21**. In another embodiment, one or more backing members **35** may be disposed along the surface of the first member **10** according to the shape or configuration of the first member **10**. For example, FIG. **16** depicts a first member **10** shaped similar as the letter "A" whereby the each leg of the A-shaped first member **10** includes a backing member **35** disposed directionally along at least part of the length of each leg of the first member **10**. In this embodiment, the one or more backing members **35** may include one or more stake holders **25** (also see FIG. **17**). For purposes of this disclosure, the frame type member **24**, one or more backing members **35** and one or more stake holders **25** may be referred to herein as "rear side members" although one or more of the frame type member **24**, one or more backing members **35** and one or more stake holders **25** may be located on a front surface **15** of a first member **10** in another embodiment of the first member **10**.

In yet another embodiment, the first member **10** may include a perimeter shape resembling a particular animal, e.g., a game animal, as such terminology is understood by persons of ordinary skill in the art of hunting. For purposes of this disclosure, game animals may include animals originating from any of the seven continents. Common North American game animals include, but are not necessarily limited to bears, deer, elk, sheep, moose, oxen, caribou, wild boar, wolves, coyotes, and varieties of each. Common African game animals include, but are not necessarily limited to lions, leopards, rhinoceroses, elephants, Cape buffalo, wildebeests, impalas, zebras, antelope, warthogs, elephants, hippopotamuses, blesboks, giraffe, ostriches, and varieties of each. As such, in one embodiment a first member **10** may include an outer perimeter configured in the shape or likeness of a particular game animal on a scale the same or similar as a life size representation of such animal effective to provide accuracy and more realistic practice opportunities to users of the present system. Moreover, the front surface **15** may include one or more details or finishing details such as (1) one or more anatomical features, e.g., hair, eyes, claws, teeth, indications of muscle separation, rib cage, hooves, and/or (2) coloring details in order to fashion the first member **10** in a life like representation of a particular animal. The hair applied to the first member **10** may include actual hide for the animal of the first member **10**, faux hide, synthetic fibers, human hair, and combinations thereof. Suitable eyes may simply be painted onto the front surface **15** or additional materials may be attached to the front surface **15** to act as a realistic eye(s) for the animal of the first member **10**. Suitable materials may include, but are not necessarily limited to plastics, glass, metals, ceramic material (e.g., porcelain), and combinations thereof. Exemplary glass eyes may include taxidermy eyes. Exemplary claws and teeth may include actual claws and/or teeth removed from an animal, taxidermy claws and/or teeth, life like claws and teeth constructed from wood, ceramic material (e.g., porcelain), plastic, glass, metal, and combinations thereof.

Referring to FIG. **18**, one exemplary first member **10** for archery and/or firearm purposes may be provided in the size, representative shape, details and coloring of a grizzly bear in an upright or standing position on its hind legs including at least one rectangular opening **17** for use with a second member **12** such as a third-party commercially available archery marksman target device or other target as shown in FIG. **1**. In another embodiment, a grizzly bear may be provided standing on all four legs. In the embodiment of FIG. **18**, the first member **10** may include dimensions as listed in Table 1 below effective for simulating the realistic appearance of a grizzly bear for purposes of archery and/or firearm target practice:

TABLE 1

| | |
|---|---|
| Height of First Member 10 | 2.44 meters (8.0 feet); |
| Width of First Member 10 | 0.91 meters (3.0 feet); |
| Height of Opening 17 | 0.46 meters (1.5 feet); |
| Width of Opening 17 | 0.46 meters (1.5 feet). |

As shown, the opening **17** may be formed in the first member **10** at a desired location for aiming purposes according to the animal in question. For example, one or more openings **17** may be formed in the first member **10** at locations corresponding to the location of one or more vital organs of the game animal form of the first member **10**.

In one embodiment, a second member **12** may be mated with or set adjacent the opening **17** similar as described above. In another embodiment, a second member **12** may be provided having a front target surface comprising one or more colors similar as the corresponding front surface **15** of the first member **10** and/or comprising one or more details effective to provide a realistic appearance of the animal in question, e.g., brown coloring representing the hair coloring and realistic appearance of a grizzly bear, suitable to provide a continuous front surface **15**. In addition, the second member **12** may include a layout or pattern on its surface accurately depicting one or more vital organs of the animal in question for targeting purposes, e.g., see the heart **22** and lungs **23** as shown in FIG. **18**. In one embodiment, a second member **12** may be manufactured to include a particular color or array of colors and/or one or more vital organs on its front target surface. In another embodiment, a third party archery target may be modified to include a desired color or array of colors and/or one or more vital organs on its front target surface. For example, vital organs may be painted onto the front target surface, screen printed onto the front target surface and/or routed out of the front or forward facing surface of a third party archery target by hand and/or machine. In one particular embodiment, a hand router may be used to form grooves in the front or forward facing surface of a third party archery target representing one or more vital organs. Thereafter, the front or forward facing surface of a third party archery target may be painted or decorated as desired.

FIG. **19** depicts the rear surface **18** of the first member **10** of FIG. **18**. As shown, the first member **10** includes a frame type member **24** for housing a second member **12** and various backing members **35** disposed across the rear surface **18** according to the perimeter layout of the first member **10**. In particular, the first member **10** includes a first backing member **35** extending upward from the frame type member **24** as a structural support for the head region **37** of the grizzly bear shaped first member **10**. The first member **10** also includes two opposing parallel backing members **35** extending downward from the upper portion of the frame type member **24** to the areas along the rear surface **18** corresponding to the legs **38**, **39** of the grizzly bear including a support member **20** disposed between the parallel backing members **35** forming the bottom side of the frame type member **24** as shown. In this embodiment, the two opposing parallel backing members **35** also operate as the side members of the frame type member **24**. In this embodiment, each of the parallel backing members **35** may include a pair of stake holders **25** with openings **26** axially aligned for receiving one or more stake members **27** there through. In another embodiment, one or more stake holders **25** may be secured to the rear surface **18** independent of backing members **35**.

FIGS. **20** and **21** depict another exemplary game animal styled first member **10** provided in the size, representative shape and coloring of an elk. Similar as the grizzly bear based first member **10** described above, the elk shaped first member **10** may include one or more openings **17** corresponding to the location of one or more vital organs, the one or more openings **17** being operationally configured to receive a corresponding second member **12** including a second member **12** having a color pattern and depiction of one or more vital organs as shown. In addition, the front surface **15** may include multiple colors indicative of the coloring of an elk as encountered in the wild.

Although the elk of FIGS. **20** and **21** is provided in a sideways orientation relative a user of the system, in another embodiment the first member **10** may include the appearance of an elk facing any other conceivable orientation

relative a user as desired or as may be ethically allowable according to one or more legislative and/or regulatory bodies. By providing a game animal styled first member **10** in a life size stature, coloring and posture, the realism of the first member **10** benefits a user in regard to his/her marksmanship. In particular, by providing a life like game animal for practice purposes users of the system ideally become accustomed to shooting under realistic appearing conditions thereby allowing a user of the system to train his/her eyes and nervous system to recognize distance and shot placement on a second member **12** of the system to enhance his/her aiming ability for efficient and/or ethical shots on target.

Similar as the grizzly bear embodiment of FIGS. **18** and **19**, the first member **10** of the elk as shown in FIG. **21** includes two opposing backing members **35** operationally configures as the top and bottom sides of the frame type member **24**. In addition, the backing members **35** are also operationally configured as stake holders—see openings **40**, **41** for receiving stake members **27** there through. In another embodiment, one or more additional backing members **35** may be added to the rear surface **18** of the first member **10**, e.g., one or more backing members **35** may be disposed along the antlers **43** of the elk.

Without limiting the invention, the first member **10** may be constructed from one or more materials including, but not necessarily limited to materials resistant to chipping, cracking, excessive bending and reshaping as a result of weathering, heat, moisture, other outside mechanical and chemical influences, as well as impacts and forces applied to the first member **10**. In an embodiment intended for archery type operations, the first member **10** may include a first body section **45** alone or further include a second body section **47** covering all or a portion of the outer surface of the first body section **45**. Herein, the first body section **45** may also be referred to as an "inner section" of the first member **10** and the second body section **47** may also be referred to as an "outer section" of the first member **10**.

Suitably, the first member **10** described above is operationally configured as a support for one or more second members **12** and not necessarily operationally configured as a target. However, it is contemplated that the first member **10** may be constructed from one or more materials effective to receive impacts from projectiles in a target like manner. For example, in an embodiment including a first member **10** intended to hold a second member **12** such as an archery target at or near its opening **17**, the first member **10** may include a first body section **45** constructed from one or more materials comprising a density effective to (1) stop and retain a tip section of an arrow without the tip section penetrating or otherwise breaking through the rear surface **18** of the first member **10**, and (2) maintain the operable shape of the first member **10** without bending, breaking or otherwise deforming although such is not necessarily required for operability of the first member **10**. In another embodiment, the first body section **45** may be constructed from one or more materials allowing passage of an arrow completely through the first member **10**, e.g., where the first member **10** is to be used in an open area such as an open field, an interior location, against a wall or other barrier, thereby eliminating or minimizing the threat of an arrow traveling out past the first member **10** and striking person(s) and/or object(s).

For archery type operations, one suitable second body section **47** may include an outer skin type configuration formed from one or more layers of solid material(s) and/or one or more layers of one or more coatings, e.g., one or more flowable coatings, covering all or a portion of the first body section **45**. In one particular embodiment for archery type operations, the second body section **47** may be comprised of one or more resilient materials effective to completely or at least partially return to its original state or condition once an arrow having penetrated the second body section **47** is removed or otherwise separated from the first member **10**.

Exemplary materials of construction of the first body section **45** may include, but are not necessarily limited to polymeric materials, woods, feathers, cork, sand, paper products including recycled paper products, textiles, cotton, coconut fiber, crumb rubber, bamboo infused foam, and combinations thereof. Suitable polymeric materials may include, but are not necessarily limited to foam including, but not necessarily limited to polyethylene foam, polystyrene foam (e.g., extruded polystyrene foam ("XPS"), expanded polystyrene foam ("EPS")), polyurethane foam (e.g., closed-cell foam, open-cell foam), polyester, compressed polyester, polyester fiber fill, synthetic rubbers, and combinations thereof. One suitable type of synthetic rubber includes, but is not necessarily limited to neoprene, e.g., neoprene sheets.

Exemplary materials of construction of the second body section **47** may include, but are not necessarily limited to polyurethane coatings (e.g., hand brush coatings, spray coatings, and combinations thereof), polyurea coatings (e.g., hand brush coatings, spray coatings, and combinations thereof), polyurethane-urea hybrid coatings (e.g., hand brush coatings, spray coatings, and combinations thereof), epoxy coatings, stretch wrap materials, vinyl wrap materials, tapes, rubber coatings, acrylic coatings, paper products, textiles, fiberglass, woven fiberglass tape, and combinations thereof. Suitable rubber coatings may include, but are not necessarily limited to silicone coatings, ethylene propylene diene monomers ("EPDM") coatings, and combinations thereof. Suitable textiles may include, but are not necessarily limited to cotton fabrics, polyester fabrics, canvas, denim, continuous filament basalt (volcano rock) fiber wrap, nylon, ripstop fabrics (e.g., ripstop nylon and ripstop polyester), and combinations thereof.

As stated above, the first member **10** of this disclosure may be built to scale. Accordingly, the first member **10** may include a maximum thickness as desired for workability and/or for ease of transport of the first member **10** based on the one or more materials of construction as may be required for one or more particular operations. The first member **10** may also include a minimum thickness as desired or as otherwise required for one or more particular operations and/or according to the one or more materials of construction of the first member **10**. Likewise, the thickness of the second body section **47** may vary as desired or as otherwise required for one or more particular operations. In addition, the proportions of the first body section **45** and the second body section **47** in regard to thickness of the first member **10** may vary according to one or more intended uses of the first member **10**. For example, in an embodiment where a first member **10** may serve for both archery and non-penetrable projectile use (e.g., paintball targeting via a paintball gun), the proportion of the second body section **47** may be increased compared to other embodiments of the first member **10**, i.e., the second body section **47** may be made thicker, to withstand impacts from projected paintballs traveling at speeds ranging from 73.2-85.3 meters per second (240.0-280.0 feet per second). Without limiting the disclosure, one exemplary first member **10** may include a second body section **47** having a thickness ranging from or about 0.16 cm

to or about 1.91 cm (from or about 0.0625 inches or 1/16 inches to or about 0.75 inches or 3/4 inches).

For archery type applications in general, one exemplary first member **10** including a first body section **45** constructed from foam, e.g., polyethylene foam, polystyrene foam, polyurethane foam, may include a first body section **45** with a maximum thickness and a minimum thickness as listed in Table 2:

TABLE 2

| | |
|---|---|
| Maximum Thickness | 10.16 cm (4.0 inches); |
| Minimum Thickness | 5.08 cm (2.0 inches). |

In regard to an archery type first member **10** provided as a life size game animal such as the grizzly bear as shown in FIG. **18** and an elk as shown in FIG. **20** including a first body section **45** constructed from extruded closed cell polystyrene foam and a second body section **47** comprising polyurea spray coating, the first member **10** suitably has a maximum thickness and a minimum thickness as listed in Table 3:

TABLE 3

| | |
|---|---|
| Maximum Thickness | 11.1 cm (4.375 inches or 4.375 inches); |
| Minimum Thickness | 5.24 cm (2.063 inches or 2.063 inches). |

As such, in one exemplary embodiment of an archery type first member **10** wherein the average thickness of the first body section **45** is 5.08 cm (2.0 inches) and the average thickness of the second body section **47** is 0.0625 inches or 1/16 inches, the second body section **47** comprises about three percent of the thickness of the first member **10**. In an embodiment of an archery type first member **10** wherein the average thickness of the first body section **45** is 5.08 cm (2.0 inches) and the average thickness of the second body section **47** is 0.281 inches or 9/32 inches, the second body section **47** comprises about twelve percent of the thickness of the first member **10**. In an embodiment of an archery type first member **10** wherein the average thickness of the first body section **45** is 5.08 cm (2.0 inches) and the average thickness of the second body section **47** is 0.32 cm (0.125 inches or 1/8 inches), the second body section **47** comprises about six percent of the thickness of the first member **10** (see dimension D1 in FIG. **22**).

Persons of ordinary skill in the art will recognize that the thickness of the first member **10** may vary without altering the workability of the first member **10**. Persons of ordinary skill in the art will also recognize that an arrow is commonly projected through the air via a bow or crossbow from about 12.2 meters per second up to about 121.9 meters per second (from about 40.0 feet per second up to about 400.00 feet per second) depending on the make/model of the bow, age of person shooting the arrow, the type of arrow used, ambient wind conditions and/or other ambient weather conditions. As stated above, the first member **10** is operationally configured as a support for one or more second members **12** and not necessarily operationally configured as a target. However, a person of ordinary skill in the art will appreciate that it is plausible that a first member **10** may be constructed according to an anticipated arrow velocity and/or arrow(s) design and/or type of arrow(s) including the materials of construction of an arrow tip section to be used with the system effective to stop and retain such arrow(s) in the first member **10** without the tip section of an arrow traveling out past the rear surface **18** in the event that such arrow misses a targeted second member **12**.

Persons of ordinary skill in the art will also recognize that the first member **10** may have a total weight according to the one or more materials of construction and one or more anatomical features included as part of the first member **10**. As such, the first member **10** is not necessarily limited to any particular maximum weight. However, in an embodiment of the first member **10** configured for archery use the first member **10** suitably has a total weight light enough for the first member **10** to be manually lifted and/or transported by one or two persons. For example, the grizzly bear styled first member **10** of FIG. **18** including a first body section **45** constructed from extruded closed cell polystyrene foam and a second body section **47** comprising a polyurea spray coating and the dimensions as listed in Table 1 may have a total weight ranging from or about 1.4 kilograms (3.0 pounds) up to or about 3.2 kilograms (7.0 pounds). For purposes of manual lifting and/or transport, a first member **10** as shown in FIG. **18** suitably includes a maximum weight of 2.04 kilograms (4.5 pounds) and a first member **10** as shown in FIG. **20** suitably includes a maximum weight of 2.04 kilograms (4.5 pounds).

The one or more materials of construction of the first body section **45** and one or more rear surface items may be formed or shaped as desired. In one embodiment, a first member **10** may be provided as a one-piece material cut down to an intended shape and size including cutting out one or more openings **17**, e.g., a naked first body section **45** provided without the inclusion of a second body section **47**. Without limiting the invention, one exemplary first member **10** and corresponding one or more rear surface items may be constructed from a solid board type material and shaped to size via one or more cutting instruments, e.g., via one or more of a CNC machine, a laser, a water jet cutter, a saw blade, a knife, a razor blade, scissors. Although the first body section **45** may be built to scale, a one-piece board type material for forming a first body section **45** representing a life size game animal may include the following dimensions: (1) 243.8×121.9×5.1 cm (96.0×48.0×2.0 inches); (2) 243.8×121.9×10.2 cm (96.0×48.0×4.0 inches).

As shown in FIG. **23**, a naked one-piece first body section **45** may be covered with an outer second body section **47** to form a first member **10**. In another embodiment, the first body section **45** may be constructed of two or more layers or sheets of solid material covered by a second body section **47** as shown in the simplified illustration of FIG. **24**. Such layers may be oriented in simple abutment and/or adhered together. Also, the layers may be stacked ninety-degrees relative the arrangement of layers as shown in FIG. **24**. In another embodiment, the first body section **45** may include a mixture of materials encased within a second body section **47** as shown in the simplified illustration of FIG. **25**. In another embodiment, the first body section **45** may include a combination of solid layered material and a mixture of materials encased within a second body section **47** as shown in the simplified illustration of FIG. **26**. In another embodiment, the first body section **45** and one or more openings **17** may be formed from a plurality of smaller sectional members **48** as shown in FIG. **27**. In one embodiment, smaller sectional members **48** may be adhered together, fastened together, taped together, and combinations thereof. In the alternative, the smaller sectional members **48** may be held in an operable orientation via a second body section **47** covering the smaller sectional members **48**.

In another embodiment, the first member **10** may be formed via a particular size and shape mold using one or more materials as described above. For example, a first member **10** may be formed via foam injection molding. In

another embodiment, a first member **10** may be formed by pouring a flowable fluid comprising one or more of the above described materials into a mold of a desired size and shape for curing. As such, a suitable flowable fluid may also comprise one or more filler materials, one or more resins, one or more epoxies, and combinations thereof providing a solid member for use as part of the present system.

With reference to FIGS. **15**, **19** and **21**, the second body section **47** may further cover the frame type member **24**, the one or more backing members **35** and one or more stake holders **25** in a manner effective to maintain each in a fixed operable position as part of the first member **10**. In an embodiment where the second body section **47** includes a hand brush and/or spray coating, e.g., a polyurethane spray coating, polyurea spray coating, polyurethane-urea hybrid spray coating, the second body section **47** may include a continuous thickness or substantially continuous thickness covering the first body section **45**. In another embodiment, the second body section **47** may include an increased thickness or greater thickness in the areas along the outer perimeter of the first body section **45** and the frame type member **24** and/or the one or more backing members **35** and/or the one or more stake holders **25** at a junction with the first body section **45** to increase the strength of attachment and/or structural strength of the frame type member **24** and/or the one or more backing members **35** and/or the one or more stake holders **25** for securing each to one another where applicable and for securing each to the first body section **45**. For example, where the average thickness of the second body section **47** is 0.32 cm (0.125 inches or ⅛ inches) as described above, additional coating material may be added or disposed along the perimeter of the frame type member **24** and/or the one or more backing members **35** and/or the one or more stake holders **25** at a junction with the first body section **45** whereby the average thickness of the second body section **47** in such areas may be increased to or about 0.48 cm (0.19 inches or 3/16 inches).

In one embodiment, the frame type member **24**, one or more backing members **35** and one or more stake holders **25** may be provided as separate component parts and assembled along the rear surface **18**. In one implementation, assembly may include abutment of at least part of the frame type member **24** with one or more backing members **35** and/or abutment of two or more backing members **35** and/or and one or more stake holders **25** whereby the second body section **47** covers the frame type member **24**, one or more backing members **35** and one or more stake holders **25** in a manner effective to hold each in a fixed position for use as part of the first member **10**. With reference to FIG. **28**, in another implementation a frame type member **24** and/or one or more backing members **35** and/or one or more stake holders **25** may include grooves **50**, slots, channels, notches, and combinations thereof providing attachment type mating surfaces for assembly of the frame type member **24** and/or one or more backing members **35** and/or one or more stake holders **25**. In another embodiment, the rear surface **18** of the first body section **45** may include one or more cutout sections **51** or cavities operable as female type mating surfaces at a desired depth or depths in the first body section **45** operationally configured to receive at least part of a corresponding frame type member **24** and/or one or more backing members **35** and/or one or more stake holders **25** therein—see FIG. **29**. As understood by the skilled artisan, one or more cutout sections **51** may correspond in perimeter size and shape as one or more of the frame type member **24** and/or one or more backing members **35** and/or one or more stake holders **25**.

In another implementation, assembly may include fastening part of the frame type member **24** to part of one or more of the backing members **35** and/or one or more stake holders **25** and/or fastening two or more backing members **35** together and/or fastening one or more backing members **35** to one or more stake holders **25** via one or more fasteners, e.g., screws, rods, bolts/nuts, and combinations thereof. In another implementation and depending on the materials of construction used, assembly may include adhering part of the frame type member **24** to one or more backing member **35** and/or adhering two or more backing members **35** together via heat, e.g., a heat gun, torch. In another implementation, assembly may include adhering part of the frame type member **24** to one or more backing members **35** and/or one or more stake holders **25** and/or adhering two or more backing members **35** together and/or adhering one or more backing members to one or more stake holders **25** via one or more adhesives, e.g., glue, epoxy, paste, and combinations thereof. In another implementation, a threaded stitch and/or tape may be used to attach one or more of the frame type member **24**, one or more of the backing members **35** and/or one or more stake holders **25**. In another embodiment, a frame type member **24** and backing members **35** as shown, for example, in FIG. **21** may be provided as a one-piece construction to be assembled with the first body section **45**.

As shown in the various figures as described above, the support member **20**, frame type member **24**, backing members **35** and stake holders **25** are provided as elongated rectangular members, e.g., plank type members, board type members, sheet type members. In another embodiment, the support member **20** and/or backing members **35** and/or stake holder **25** may be provided in other three-dimensional configurations, including rounded surfaces as shown in FIG. **30**. In yet another embodiment as shown in FIG. **31**, a first member **10** may include one or more apertures **53** operationally configured for the passage of wind there through in a manner effective to reduce wind forces upon the first member **10** during operation. In one embodiment, a first member **10** may include apertures of a similar shape and/or size. As understood by the skilled artisan, the number and size of the apertures **53** may vary. Also, the apertures **53** may be provided in a uniform pattern or in a non-uniform pattern as shown in FIG. **31**.

A discussion concerning the manufacture of one non-limiting embodiment of a first member **10** is presented below. The skilled artisan will appreciate that the details described below may be considered as part of the manufacturing process of a first member **10** generally, regardless of the size, shape and appearance of the first member **10**. For demonstrative purposes, manufacture of a first member **10** is described below in relation to manufacture of a first member **10** for archery use provided as a life size game animal in the shape and appearance of a grizzly bear as shown in FIG. **18**.

Choice of Materials of the First Body Section **45** of the First Member **10**

The material of construction for the first body section **45** of the first member **10** includes a sheet of closed cell extruded polystyrene foam with an RSI value of 0.88 (R-value of 5.0). The sheet of closed cell extruded polystyrene foam or "XPS" is provided in the following dimensions:

Centimeters: 243.8×121.9×5.1

Inches: 96.0×48.0×2.0.

One suitable commercially available XPS includes Styrofoam® Insulation Blue Board from The Dow Chemical Company, Midland, Michigan, U.S.A. ("Dow"). For archery type operations, closed cell XPS provides one or more of the

following qualities: (1) XPS has a density strong enough to withstand the manufacturing process including handling and shape forming of the first member **10**; (2) heat resistance; (3) water resistance; (4) XPS has the ability to maintain or hold its shape over extended periods of time making it suitable for shaping into a plurality of silhouette forms including the forms depicted as part of this disclosure; (5) XPS cuts fairly easy making it suitable for shaping into a plurality of silhouette forms; and (6) XPS maintains its integrity without material breakdown when applying a second body section **47** including a hand brush coating and/or spray coating as described above.

Forming the Perimeter Shape or Silhouette of the First Member **10**

Once a desired game animal shape or silhouette is chosen, e.g., a grizzly bear form, an outlay design of a desired grizzly bear form is prepared e.g., drafted on paper via a hand drawing and/or via a computer drawing. Once a desired grizzly bear outlay design is completed, one or more additional details to be included along the front surface **15** of the first member **10** may be determined as well as the size, shape and location of the one or more openings **17** in accordance with the location of vital organs of the grizzly bear based on the outlay design. Thereafter, the size, shape, type and location of rear surface items such as a ledge type member **21**, frame type member **24** including the backing members **35**, and one or more stake holders **25** are determined for use along the rear surface **18** of the first body section **45** in accordance with (1) the size or surface area and shape of the rear surface **18** of the first body section **45**, (2) the size, shape and location of the one or more openings **17**, (3) the amount of backing structural support needed for operation of the first member **10**, and (4) the amount of support needed by the support member **20**.

Once the grizzly bear outlay design and corresponding parts are determined, a sheet of XPS can be readied for forming into the grizzly bear outlay design on a life size scale. First, the computer drawings and/or hand drawings of the grizzly bear outlay design are converted into computer files, e.g., .dxf files, readable by a CNC router machine operationally configured to cut along three axes (Z, Y and Z). One non-limiting example of a commercially available CNC router machine includes the G3 Digital Cutter commercially available from Zünd Systemtechnik AG, Altstätten, Switzerland. As understood by the skilled artisan, original computer drawings may be uploaded directly to a CNC router machine. As also understood by the skilled artisan, .dxf files suitably provide the CNC router machine with information concerning where the CNC router machine will enter the XPS material, the path the CNC router machine will follow and the depth of the router bit within the XPS material during operation. In one suitable mode of operation, the CNC router machine begins the cutting process by cutting or otherwise forming the perimeter silhouette of the grizzly bear and the opening **17**. Thereafter, the CNC router machine routes out any front surface **15** details as programmed. For example, the CNC router machine may route out one or more anatomical features of the grizzly bear. Also, the CNC router machine may form one or more depressions or cavities in the front surface **15** for receiving eyes, claws and teeth therein.

For purposes of forming a life size game animal silhouette such as a grizzly bear, a CNC router machine is effective in that it achieves smooth cuts in the XPS material and is capable of routing intricate details on the front surface **15** of the first member **10**. Persons of ordinary skill in the art will appreciate that even though a life size game animal silhouette may be formed by hand using one or more cutting instruments, such a task may be time consuming and physically exhausting.

Another advantage to using a sheet of XPS with the dimensions as described above to form a grizzly bear styled first member **10** as shown in FIGS. **18** and **19** is that the support member **20**, frame type member **24**, the backing members **35** and the stake holders **25** may be formed from the same sheet of XPS as the first body section **45**, thereby, minimizing material costs. As such, computer software may be employed to best "nest" or place the various individual component parts making up the first member **10** along a sheet of XPS in a manner effective to best utilize the sheet of XPS. As understood by the skilled artisan, more than one sheet of XPS may be required for constructing a different embodiment of a first member **10**.

Assembly of the First Member **10**

Once the first body section **45**, support member **20**, frame type member **24**, backing members **35** and stake holders **25** are cut out of a sheet of XPS, each is attached to the rear surface **18** of the first body section **45** via an adhesive, e.g., Loctite® PL300 adhesive commercially available from Henkel Corporation, Westlake, Ohio, U.S.A. The adhered component parts may be allowed to cure for about twenty-four hours.

Loctite® PL300 adhesive, or equivalent, is suitable for the following reasons: (1) Loctite® PL300 adhesive has desirable adhesive properties for use with foams including XPS, (2) Loctite® PL300 adhesive does not affect the material integrity of the XPS upon contact, (3) Loctite® PL300 adhesive's cure time is relatively short thereby minimizing the product time for the first member **10**, (4) Loctite® PL300 adhesive is water soluble making it environmentally friendly and allowing for ease of clean up; and (5) Loctite® PL300 adhesive is recommended by Dow for use with their XPS products.

Addition of the Second Body Section **47** to the First Body Section **45**

Once the Loctite® PL300 adhesive is cured, the first body member **10** is ready to receive its second body section **47** in the form of a polyurea elastomer spray ("spray coating") that is a reacted product of two components that are mixed and sprayed onto the first body section **45** in one or more passes. The first component (the "A" component) of the spray coating is UL XT **66**, A-side and the second component (the "B" component) is UL XT **66**, B-side, both of which are commercially available from Ultimate Linings, located in Houston, Texas, U.S.A.

UL XT **66**, A-side (the "A" component) is comprised of:

(1) 37.0-61.0 percent Propanol [(1-methyl-1,2-ethanediyl)bis(oxy)] bis-polymer with 1,1'-methylenebis [isocyanateobenzene] and oxybis [propanol] with a CAS (Chemical Abstract Services) number of 0068092-58-0;

(2) 30.0-60.0 percent 4,4'-Methylenediphenyl Diisocyanate with a CAS number of 0000101-68-8;

(3) 4.0-10.0 percent Carbonic acid, cyclic propylene ester with a CAS 0000108-32-7; and has the properties as listed in Table 4:

TABLE 4

| | |
|---|---|
| VOC Regulatory | 0.00 kg (0.00 pounds); |
| Density | 1151.5 grams/liter (9.61 pounds/gallon); |
| Specific Gravity | 1.15; |
| Appearance | Clear Liquid; |
| Odor Description | Aromatic; |

TABLE 4-continued

| | |
|---|---|
| Water Solubility | Reacts with water; |
| Flash Point | 93.3° C. (200.0° F.); |
| Viscosity | 500.0-1000.0 millipascal-seconds (500.0-1000.0 centipoise); |
| Vapor Density | Heavier than air; |
| Low Boiling Point | 150.0° C. (302.0° F.); |
| Evaporation Rate | Slower than ether. |

UL XT **66**, B-side (the "B" component) is comprised of:

(1) 10.0-24.0 percent Diethyltoluendediamine with a CAS number of 0068479-98-1;

(2) 3.0-7.0 percent Carbon Black with a CAS number of 0001333-86-4;

(3) 0.0-0.6 percent Silica, crystalline with a CAS 0014808-60-7.

The spray coating is suitable for use with XPS for the following reasons: (1) the spray coating adheres directly to the XPS forming a one-piece first member **10**; (2) the spray coating adheres the various component parts to the first body section **45** together thereby enhancing the structural stability of the first member **10** during operation; (3) the spray coating is resistant to ultra-violet ("UV") radiation, i.e., "UV resistant," allowing the first member **10** to be exposed to direct sunlight for many years without structural degradation to the spray coating or fading in color; and (4) the spray coating does not affect the material integrity of the XPS upon contact with the XPS.

Another feature of the present disclosure is the system of equipment and process by which the spray coating is applied to the XPS. In order to effectively spray the spray coating, the system equipment is operationally configured to store, pump, heat, mix and spray the two components of the spray coating at a desired temperature, pressure, viscosity and material ratio. Control of such factors produces a desired first member **10** having a functionally desired second body section **47** for archery purposes.

In general, a volume of the "A" component and a volume of the "B" component are provided in separate fluid containers such as drums, tanks or the like and are mixed together during spraying operations as the "A" component and the "B" enter a spray gun at a desired temperature and volume to provide a homogeneous mixture exiting the spray gun. In particular, a fluid proportioner is provided having a first heated fluid conduit, e.g., a hose, in fluid communication with a first container housing the "A" component and a second heated fluid conduit, e.g., a hose, in fluid communication with a second container housing the "B" component. The first heated fluid conduit is operationally configured to condition the "A" component to a desired viscosity prior to mixing and the second heated fluid conduit is operationally configured to condition the "B" component to a desired viscosity prior to mixing. Said another way, the first heated fluid conduit and the second heated fluid conduit are each operationally configured to heat corresponding spray coating components and maintain the spray coating components at a desired temperature(s). In addition, a fluid proportioner is operationally configured to pressurize the spray coating components to a desired constant pressure while also maintaining an optimal ratio of the "A" and "B" components for mixing. One exemplary fluid proportioner for manufacture of the first member **10** may include the Graco® E-XP1 or the A-XP1 Reactor coatings proportioner commercially available from Graco Inc., Minneapolis, Minnesota, U.S.A. In addition, fluid proportioner operations are described in U.S. Pat. No. 9,221,669 B2, titled "Waste Heat Recovery System for Pumping System," issued Dec. 29, 2015; U.S. Pat. No. 8,568,104 B2, titled "Fast Set Material Proportioner," issued Oct. 29, 2013, each of which is hereby incorporated by reference in its entirety.

In operation, the pressure of the first and second fluid conduits is maintained at or about 16202.7 kPa (2350.0 PSI) and the internal temperature of the first and second heated fluid conduits, i.e., the temperature of the "A" component and the "B" component, are each maintained at a constant temperature of or about 68.3° C. (155.0° F.) as the two components enter a mixing chamber within the spray gun. Suitably, the "A" and "B" components are mixed at a 1:1 ratio at 68.3° C. (155.0° F.) within a mixing chamber of the spray gun producing an exothermic reaction that causes the temperature of the mixture to increase to a spray application temperature from or about 85.0° C. (185.0° F.) to or about 98.9° C. (210.0° F.). At pressures below or above 16202.7 kPa (2350.0 PSI), the "A" component and the "B" component will not properly mix resulting in poor or over atomization of the spray coating or lack atomization altogether. At temperatures less than 68.3° C. (155.0° F.), the reaction between the "A" component and the "B" component will not produce the desired polymerization of the spray coating. As such, at undesired pressures and temperatures, the resulting spray coating does not properly adhere to the surface of the XPS. Moreover, at temperatures greater than 98.9° C. (210.0° F.), the spray coating is hot enough to melt, deform and/or otherwise damage the integrity and appearance of the surface of the XPS upon contact. At temperatures less than 85.0° C. (185.0° F.), the spray coating is not hot enough to maintain a liquid form suitable for proper spraying of the spray coating onto the surface of the XPS. One non-limiting example of a commercially available spray gun for use as part of the present disclosure includes the FUSION® AP Spray Gun available from Graco Inc., Minneapolis, Minnesota, U.S.A. In addition, an exemplary spray gun is described in U.S. Pat. No. 7,694,893, titled "Plural Component Spray Gun for Fast Setting Materials," issued Apr. 13, 2010, which is hereby incorporated by reference in its entirety.

As understood by persons of ordinary skill in the art of fluid proportioners, the amount of time necessary to reach the desired spray temperature of 68.3° C. (155.0° F.) may vary based on the ambient temperature. For example, an ambient temperature of 15.6° C. (60.0° F.) will require a longer heating process than an ambient temperature of 32.2° C. (90.0° F.). A fluid proportioner, including the Graco E-XP1 or the A-XP1 Reactor coatings proportioner, is operationally configured to be programmed to heat the "A" component and the "B" component each to a desired temperature and provide a digital readout signaling to user(s) when the desired temperature of the "A" and "B" components is reached. As also understood by persons of ordinary skill in the art of fluid proportioners, a fluid proportioner, including the Graco E-XP1 or the A-XP1 Reactor coatings proportioner, is operationally configured to regulate the temperature and pressure of the "A" component and the "B" component via temperature and pressure controls, and is also operationally configured to monitor the mixture composition to ensure that the mixture undergoes a desired exothermic reaction. If the fluid proportioner detects that the temperature and/or pressure of either the "A" component or the "B" component is higher or lower than the programmed working temperature and pressure, the fluid proportioner is operationally configured to be directed to an OFF position to protect the component parts of the fluid proportioner and/or the spray gun from unwanted damage.

As understood by the skilled artisan, a second body section **47** in the form of a permanent polymer spray coating, e.g., polyurethane coatings, polyurea coatings, polyurethane-urea hybrid coatings, may be provided in a thickness according to the amount of spray coating that is applied to the first body section **45**. As also understood by the skilled artisan, the thickness of the second body section **47** may affect its mechanical characteristics. Typically, the more passes made when applying the spray coating, the thicker the resulting second body section **47**. In regard to the "A" component UL XT **66**, A-side and the "B" component UL XT **66**, B-side, suitable thicknesses of the second body section **47** may be formed according to the number of spray passes as described in Table 5:

TABLE 5

| Number of Spray Passes | Average Thickness of the Second Body Section 47 |
|---|---|
| 2 | 0.79 mm (0.0312 inches or 2/64 inches); |
| 3 | 1.19 mm (0.0469 inches or 3/64 inches); |
| 4 | 1.6 mm (0.0625 inches or 4/64 inches); |
| 5 | 1.98 mm (0.0781 inches or 5/64 inches). |

To form an effective second body section **47**, the spray nozzle used is suitably held apart from the first body section **45** during each spray pass at a distance from or about 60.96 cm (24.0 inches) to or about 91.4 cm (36.0 inches).

In addition, the first body section **45** of the life size grizzly bear of FIG. **18** constructed from extruded closed cell polystyrene foam has a total weight of or about 2.3 kg (5.0 pounds). As a person of ordinary skill in the art will appreciate, the total weight of the first member **10** may vary according to the total volume of spray coating applied to the first body section **45**. In view of Table 5, a first member **10** having a total of two (2) passes of spray coating has a total weight of or about 3.6 kg (8.0 pounds), meaning the second body section **47** comprises 37.5 percent of the total weight of the first member **10**. A first member **10** having a total of five (5) passes of spray coating has a total weight of or about 5.7 kg (12.5 pounds), meaning the second body section **47** comprises 60.0 percent the total weight of the first member **10**. Furthermore, the percentage may vary according to the materials of construction, shape and thickness of the first body section **45**.

The spray coating described above suitably dries in about seven (7.0) seconds once the spray coating contacts the first body section **45**. The dry time may vary depending on the ambient temperature and/or humidity. The spray coating suitably cools to room temperature and cures in a period of about two to three hours.

The spray coating may be formulated to include any color as desired. For example, a brown pigment or combination of pigments forming a brown color may be added to the spray coating to provide a brown colored second body section **45** as shown in FIG. **18**. Suitable pigments for use herein include, but are not necessarily limited to urethane pigments (i.e., urethane colorants and dyes). Once the spray coating is applied to the first body section **45** one more additional colors may be added to the surface of the first member **10** via one or more mediums e.g., paint(s), dye(s), ink(s), and combinations thereof, to depict features of a grizzly bear thereon including changes in coloring, shadowing, depth, details regarding bear surface features (see FIG. **18**).

First Member **10** Surface Finishing Details

By customizing the color of the spray coating of the first member **10**, the total amount of surface mediums otherwise required to provide an accurate brownish color to the first member **10** is minimized or otherwise eliminated depending on the desired final surface appearance of the grizzly bear styled first member **10**. As such, additional expense can be focused on the addition of one or more finishing details to the first member **10** as described above. Items such as hair, taxidermy eyes, taxidermy claws, and taxidermy teeth may be secured to the surface of the first member **10** via one or more adhesives, tapes, fasteners, and combinations thereof. For example, hair may be secured to the first member **10** via fasteners including, but not necessarily limited to staples, nylon sutures, and combinations thereof.

In another embodiment, a second body section **47** in the form of a polyurea elastomer spray ("spray coating") may be provided including an "A" component and a "B" component. The "A" component may be comprised of:

(1) 32.0-59.0 percent Polyurethane Prepolymer with a CAS (Chemical Abstract Services) number of 0068092-58-0;

(2) 31.0-57.0 percent 4,4'-Methylenediphenyl Diisocyanate with a CAS number of 0000101-68-8;

(3) 5.0-10.0 percent 4-Methyl-1,3-Dioxolan-2-one with a CAS 0000108-32-7; and has the properties as listed in Table 6:

TABLE 6

| | |
|---|---|
| VOC Regulatory | 0.00 kg (0.00 pounds); |
| Density | 1151.5 grams/liter (9.61 pounds/gallon); |
| Specific Gravity | 1.15; |
| Appearance | Clear Liquid; |
| Odor Description | Aromatic; |
| Water Solubility | Reacts with water; |
| Flash Point | 93.3° C. (200.0° F.); |
| Viscosity | 500.0-1000.0 millipascal-seconds (500.0-1000.0 centipoise); |
| Vapor Density | Heavier than air; |
| Low Boiling Point | 150.0° C. (302.0° F.); |
| Evaporation Rate | Slower than ether. |

The "B" component may be comprised of:

(1) 13.0-24.0 percent Aromatic Amine with a CAS number of 0068479-98-1;

(2) 4.0-7.0 percent Carbon Black with a CAS number of 0001333-86-4;

(3) 5.0-10.0 percent 4-Methyl-1,3-Dioxolan-2-one with a CAS 0000108-32-7.

Although the present disclosure describes various exemplary embodiments and implementations, it should be understood that the various features, aspects and functionality described in one or more of the individual embodiments are not limited in their applicability to the particular embodiment with which they are described, but instead might be applied, alone or in various combinations, to one or more of the other embodiments, whether or not such embodiments are described and whether or not such features are presented as being a part of a described embodiment. Thus, the breadth and scope of the claimed invention should not be limited by any of the above-described embodiments.

Terms and phrases used in this disclosure, and variations thereof, unless otherwise expressly stated, should be construed as open-ended as opposed to limiting. As examples of the foregoing: the term "including" should be read as meaning "including, without limitation" or the like, the term "example" is used to provide exemplary instances of the item in discussion, not an exhaustive or limiting list thereof, the terms "a" or "an" should be read as meaning "at least one," "one or more," or the like, and adjectives such as "conventional," "traditional," "normal," "standard,"

"known" and terms of similar meaning should not be construed as limiting the item described to a given time period or to an item available as of a given time.

The presence of broadening words and phrases such as "one or more," "at least," "but not limited to" or other like phrases in some instances shall not be read to mean that the narrower case is intended or required in instances where such broadening phrases might be absent. The use of the term "assembly" does not imply that the components or functionality described or claimed as part of the module are all configured in a common package.

Persons of ordinary skill in the art will recognize that many modifications may be made to the present disclosure and the embodiment(s) described herein are meant to be illustrative only and should not be taken as limiting the invention, which is defined in the claims.

We claim:

**1**. A process for manufacturing a support for a projectile target, the process comprising the steps of:

forming component parts of the support from a three-dimensional single sheet of closed cell extruded polystyrene foam, the component parts formed including: (1) an upright first body having (a) a selected perimeter shape and size defining a height of the support; (b) a front surface; (c) a rear surface; and (d) an opening there through at a selected location on the upright first body, the opening having a selected size and shape; and (2) one or more rear side members to be disposed along the rear surface of the upright first body, each of the one or more rear side members having a selected size and shape;

assembling the one or more rear side members to the rear surface of the upright first body at one or more locations according to the perimeter shape and size of the upright first body, the size and shape of the one or more rear side members, and according to the size, shape and selected location of the opening; and

applying one or more coatings onto the assembly of the upright first body and the one or more rear side members at an average thickness effective to maintain the one or more rear side members in a fixed position with the upright first body once the one or more coatings cure.

**2**. The process of claim **1**, wherein in the forming step the three-dimensional single sheet of closed cell extruded polystyrene foam has an R-value of 5.0 and wherein the applying step comprises applying one or more spray coatings onto the assembly of the upright first body and the one or more rear side members at a spray application temperature from or about 185.0° F. to or about 210.0° F.

**3**. The process of claim **1**, wherein the forming step includes designating a first part of the three-dimensional single sheet of closed cell extruded polystyrene foam for forming the upright first body and designating a remaining part of the three-dimensional single sheet of closed cell extruded polystyrene foam for forming the one or more rear side members according to the dimensions of the three-dimensional single sheet of closed cell extruded polystyrene foam, the perimeter shape and size of the upright first body, and the size and shape of the one or more rear side members.

**4**. The process of claim **1**, wherein the forming step includes forming the opening of the upright first body to include a selected height and width and forming at least one rear side member of the one or more rear side members to include a length greater than the height and width of the opening.

**5**. The process of claim **1**, wherein the assembling step includes assembling the one or more rear side members onto the rear surface of the upright first body at one or more locations effective to hold the projectile target at the opening of the upright first body once the one or more coatings cure.

**6**. The process of claim **1**, wherein the assembling step includes attaching the one or more rear side members to the rear surface of the upright first body via adhesive.

**7**. The process of claim **1**, wherein the applying step comprises applying one or more spray coatings onto the assembly of the upright first body and the one or more rear side members, the one or more spray coatings comprising a reacted product of two components including a first component comprising 37.0-61.0 percent Propanol [(1-methyl-1,2-ethanediyl)bis(oxy)] bis-polymer with 1,1'-methylenebis [isocyanateobenzene] and oxybis [propanol], 30.0-60.0 percent 4,4'-Methylenediphenyl Diisocyanate, and 4.0-10.0 percent Carbonic acid, cyclic propylene ester and a second component comprising 10.0-24.0 percent Diethyltoluenediamine, 3.0-7.0 percent Carbon Black, and 0.0-0.6 percent Silica, crystalline.

**8**. The process of claim **7**, wherein the applying step includes mixing the first component and the second component at a 1:1 ratio and at a constant temperature of 155.0° F. within a mixing chamber of a spray gun producing an exothermic reaction causing the temperature of the mixture of the first component and the second component to increase to a spray application temperature from or about 185.0° F. to or about 210.0° F.

**9**. The process of claim **8**, wherein the applying step includes applying the one or more spray coatings onto the assembly of the upright first body and the one or more rear side members via the spray gun in one or more passes at a spray distance from or about 24.0 inches to or about 36.0 inches.

**10**. The process of claim **1**, wherein the applying step includes applying one or more spray coatings onto the assembly of the upright first body and the one or more rear side members, the one or more spray coatings comprising a reacted product of two components and a color pigment selected according to the selected perimeter shape of the upright first body.

**11**. The process of claim **1**, wherein the forming step includes forming the upright first body and the one or more rear side members from the three-dimensional single sheet of closed cell extruded polystyrene foam using a CNC router machine programmed to cut the single sheet of closed cell extruded polystyrene foam along three axes to form the component parts of the support.

**12**. The process of claim **1**, wherein the forming step includes forming an opening through at least one of the one or more rear side members.

**13**. A process for manufacturing a support for a projectile target, the process comprising the steps of:

forming individual component parts of the support from a single sheet of closed cell extruded polystyrene foam using a CNC router machine programmed to nest the individual component parts along the single sheet of closed cell extruded polystyrene foam and cut the single sheet of closed cell extruded polystyrene foam along three axes to form the individual component parts, the individual component parts including (1) an upright first body having (a) a selected perimeter shape and size defining a height of the support, (b) a front surface, (c) a rear surface, and (d) an opening there through at a selected location on the upright first body, the opening having a selected size and shape, and (2)

one or more rear side members to be disposed along the rear surface of the upright first body, each of the one or more rear side members having a selected size and shape;

assembling the one or more rear side members to the rear surface of the upright first body at one or more locations according to the perimeter shape and size of the upright first body, the size and shape of the one or more rear side members, and according to the size, shape and selected location of the opening; and

applying one or more coatings onto the assembly of the upright first body and the one or more rear side members at an average thickness effective to maintain the one or more rear side members in a fixed position with the upright first body once the one or more coatings cure.

**14**. The process of claim **13**, wherein the forming step further includes using the CNC router machine to route out one or more finishing details on the front surface of the upright first body.

**15**. The process of claim **13**, wherein the forming step includes forming the upright first body to include a perimeter shape and size of a game animal and further includes using the CNC router machine to route out one or more anatomical features of the game animal on the front surface of the upright first body.

**16**. The process of claim **15**, wherein the forming step further includes using the CNC router machine to form one or more cavities in the front surface of the upright first body for receiving therein items selected from the group consisting of game animal eyes, claws, and teeth.

**17**. The process of claim **15**, wherein the applying step includes:

applying one or more polymer spray coatings comprising a color pigment onto the assembly of the upright first body and the one or more rear side members via a spray gun at a spray application temperature from or about 185.0° F. to or about 210.0° F., wherein the color pigment is selected according to the game animal formed from the upright first body; and

applying the spray coating onto the assembly of the upright first body and the one or more rear side members via the spray gun in one or more passes at a spray distance from or about 24.0 inches to or about 36.0 inches.

**18**. The process of claim **17**, wherein the applying step includes:

applying one or more polymer spray coatings comprising a urethane colorant onto the assembly of the upright first body and the one or more rear side members; and

applying one or more colors to a part of the one or more polymer spray coatings covering the upright first body via one or more mediums selected from the group consisting of paints, dyes, inks, and combinations thereof, to depict features of the game animal including changes in coloring, shadowing, and depth.

**19**. The process of claim **13**, wherein in the forming step the single sheet of closed cell extruded polystyrene foam has an R-value of 5.0 and dimensions of 96.0 inches×48.0 inches×2.0 inches and the upright first body is formed to include a perimeter shape and size of a game animal, and wherein the applying step includes applying one or more polymer spray coatings onto the assembly of the upright first body and the one or more rear side members using a spray gun at a spray application temperature from or about 185.0° F. to or about 210.0° F.

**20**. The process of claim **15**, wherein in the forming step the selected location of the opening corresponds to a location of one or more vital organs of the game animal.

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